DIVA8 SYSTEM

User Manual

DIVA8MG2-M/S-10UMS01-V01R01

Delivering Your Message

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1. Welcome:

Thank you for choosing ATEÏS DIVA8M . We (at ATEÏS) hope you will enjoy to use this exciting piece of technology as much as we enjoy developing and building it.

This Help file Manual version is: Ver.EN.3.1

This files has been written for the ATEIS DIVA software version: VER 3.0.0.8 and higher.

This manual is intended to provide users the necessary understanding to safely uses DIVA8 system as well as guide users through all configuration procedures.

This manual can be updated at any time without prior notice in order to keep this manual up to date.

In case of errors in this manual or not clear process description, feel free to submit us mistakes, suggestions or questions by sending an email.

This document intends to be a complete manual and ATEIS hopes that this Help file manual will provide you all information or answers needed. However if you have any questions, feel free to contact us.

1.1. Ateis Presentation

With more than twenty years of experience, ATEÏS has quickly established itself as a leading manufacturer of Public Address, Voice Alarm systems and counter intercoms. The constant growth of market share in Europe provides confirmation of the quality of ATEÏS's commercial and technical approach.

Products:

The company now offers a full range of sound equipment: microphones, preamplifiers, digital processors, digital audio matrixes, loud-speaker monitoring systems, amplifiers, etc. ATEÏS designs and manufactures leading products in the voice alarm systems market which have been certified EN60849 compliant by the TÜV.

Development:

Thanks to a development team that includes thirty engineers, and to constant investment, we are able to respond rapidly to the demands of our various markets with specific solutions and cutting edge technology. We have distributors in more than fifteen countries in Europe and the Middle East, with whom we have carried out major projects. In choosing ATEÏS, you are guaranteed a trustworthy partner that can be counted on for the long term.

ATEÏS Field:

ATEÏS's audio systems have been installed in the following markets:

- Railways
- Subways
- Airports
- High raise buildings
- Hotels
- Restaurants

- Shopping malls
- Theme parks
- Places of worship
- Stadia.
- Museums.
- Industrial buildings
- Industrial plants
- Commercial buildings

1.2. EC Declaration of Conformity

Documentation CE marking. This needs to be added to each commercial/technical document

CE

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EC DECLARATION OF CONFORMITY

Ateis, as manufacturer having sole responsibility, hereby declares that our delivered version of the following product complies with the applicable directives. In case of alterations of the product, not agreed upon by Ateis, this declaration is no longer valid.

EN54-16:2008
Voice Alarm Control and Indicating Equipment (VACIE)

Product: **DIVA8 System VACIE**

Certified options:
Audible warning
Manual reset of the voice alarm condition
Voice alarm condition output
Indication of faults related to the transmission path of the CIE
Indication of faults related to voice alarm zones
Voice alarm manual control
Interface to external control device(s)
Emergency microphones
Redundant amplifiers

Ancillary functions:
Commercial paging
Backgroud music distribution

2. DIVA8 System Presentation

DIVA8M responds to public address requirements and Voice Alarm EN 54-16 compliance for small to medium installations.

The DIVA8M module unit houses: audio digital signal processing (DSP), a matrix, a digital message player, a fully monitored fireman microphone, amplifiers monitoring with switchover to backup amplifier and loudspeaker lines monitoring. It can process and route one PSSxxDT security microphone console or up to eight cascaded PSM paging microphones and two 0 dB audio inputs, plus one Mic/Line input, into 2 different channels (Music + Voice). Each input is fitted with volume controls and equalizers. All audio inputs feature contact and VOX activation (ideal when using the cordless microphone, for example).
Up to 45 minutes of digital messages can be downloaded and recorded as WAV files directly from a computer into DIVA8M. Two messages can be played simultaneously in different zones. One of the messages can be used as a chime for the PSS microphone. Nine monitored alarm inputs making it possible to obtain the pre-programmed routings.

Each DIVA module has eight output zones with a+b wiring. Each zone can be routed manually or automatically to one of the system's audio channels (Music and Voice). The number of zones can be extended up to 128 zones with DIVA8MS (Slave-module). The two Music channels can be switched ON/OFF in each zone separately. In case of Evacuation, the Music channel can be used as a second alarm channel.

A DIVA system requires only one 2 channel amplifier (one for Music, one for Voice). The Music amplifier will act as a backup amplifier in case of a Voice amplifier failure. Each channel can handel up to 500 W of audio power (100 V).

From the front panels, the user can manually route the fireman microphone signal and three digital messages into the selected zones, adjust the audio level and switch (ON/OFF) the music in each zone separately. In case of evacuation, the zones attenuators are automatically bypassed. One output contact per zone (eight per unit) can be activated each time the zone is occupied with a source having a higher priority than the music (Alarm or microphone paging…).

As an EN 54-16 security system, all DIVA components and peripherals are constantly monitored (without music interruption). All incidents are recorded into a data file which can be consulted on the DIVA display or on a PC. Also any detected faults and alarm status are signalled by general fault and alarm output contacts. A local loudspeaker enables selective listening to all the sources and the system's output signals.

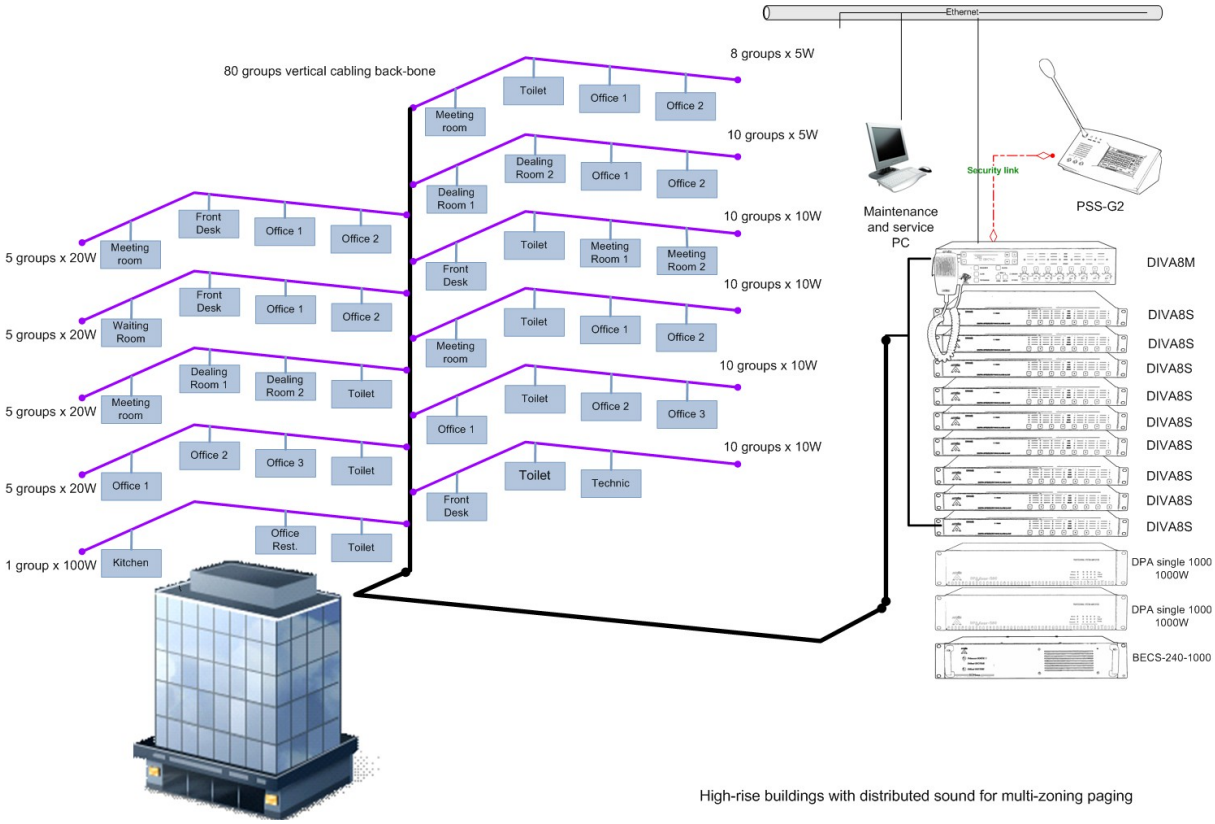
The setup of DIVA is realized through a PC computer and the PCDIVA configuration software (Windows compatible). Access can be password-protected.

The routing and the level of the music sources can be controlled directly from the PSS microphone.

All these features make DIVA the ideal system for shopping malls, hotels, restaurants, museums and many other public places.

2.1. Application Example 1

High rise building with distributed sound for multi-zone paging:



High-rise buildings with distributed sound for multi-zoning paging

This tutorial describes a PAVA system, VACIE, which is used for voice evacuation with an automatic link to a fire-panel system, FACIE, for high rise building applications with multizone paging requirements. The DIVA concept represents a reliable and affordable system solution.

The system consists of a central rack that contains all equipment including: DIVA8M - Master unit and 9 pcs. of DIVA8S - Slave units, covering an 80 zones background music and selective paging and voice evacuation system. From the central rack, a multi-pair cable transports the audio to the multiple zones with variable loads. The DIVA8M - Master unit provides the fireman's operating section on the central paging facility rack and a touch-screen multi-zone paging and control console. This part of the system is also linked to the FACIE.

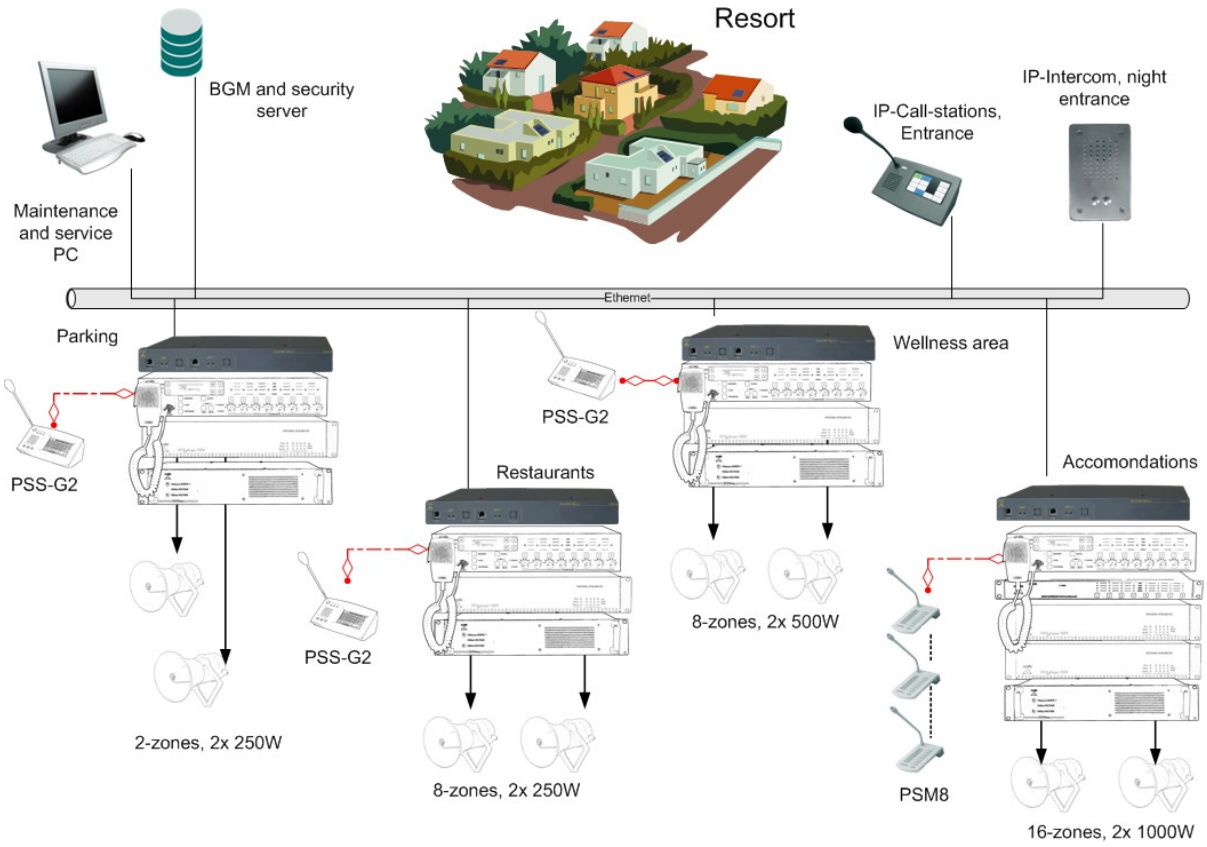
The DIVA8M - Master unit is linked with the DIVA8S - Slave units using a secured link over RJ45. Two powerful 1000 Watt amplifiers provide signals for paging and background music. The background music amplifier is also used as back-up amplifier in case of an amplifier failure. This unique concept guarantees savings on rack assembly and amplifier power.

The paging console is connected via a secured dedicated link with the central equipment racks. A TCP/IP link from the main system to the SERVICE area is meant for maintenance use and remote access.
The paging desk can do 'all-call' and zoned call announcements and has a monitor loudspeaker in the unit for system monitoring.

Central equipment rack:
- 1x DIVA8M, for 8 zone paging
- 9x DIVA8S, for 9 x 8 zone paging
- 1x DPAsingle1000, Paging amplifier
- 1x DPAsingle1000, Music & Backup amplifier
- 1x BECS150, Power & Battery back-up device
- 1x PSS-G2 Paging console

2.2. Application Example 2

Resort:



This tutorial describes a PAVA system, VACIE, which is used for voice evacuation with an automatic link to a firepanel system, FACIE, for a resort with several buildings linked over IP. The DIVA System concept stands for a reliable and affordable system solution where each building has its own FACIE linked to the VACIE consisting of a DIVA8M - Master unit with amplifiers and battery backup facilities.

The system consists of 4 individual PAVA equipment sets that are linked over IP. A server with special software, Vox- Net, surveys the audio/data connections between the 4 sub systems and the IP-paging facilities. Vox-Net - IP media software also provides surveyed intercom stations to be included into the system and provides multi-channels BGM. The standalone DIVA8M provides the fireman's operating section on the central paging facility rack and a touchscreen multi-zone paging and control console. This part of the system is also linked to the FACIE.

Depending on the situation, digital power amplifiers are used; 4 x 125 W, 4 x 250 Watt or 1 x 1000 W. DIVA8M and DIVA8S only need 2 amplifiers. One for Paging and one for BGM/Back-up. The background music amplifier is also used as back-up amplifier in case of an amplifier failure. This unique concept warrantees savings on rack assembly and amplifier power.

The paging consoles, PSS-G2 and PSM8 are connected via a secured dedicated link with the central equipment racks. When multiple PSM8's are used into one DIVA8M, only the first one, master, can be used for security purposes. The remaining ones, slaves, are not surveyed.

A TCP/IP link from the main system to the SERVICE area is meant for maintenance use and remote access. The paging console can do all calls and zone-calls and has a feedback loudspeaker in the unit for system monitoring.

Central equipment:
- 1x Server PC with Vox-Net-Server, IP-media software
- 1x IP call station, PMIP-D
- 1x Intercom doorstation, UCIP-1
- 2x Vox-Net-In, IP media licence

Parking Area:
- 1x DIVA8M, master unit
- 1x DPAfour125, digital power amplifier
- 1x BECS150, battery backup unit
- 1x PSS-G2, paging console
- 1x Vox-Net OUTPUT Node license

Restaurants:
- 1x DIVA8M, master unit
- 1x DPAfour125, digital power amplifier
- 1x BECS150, battery backup unit
- 1x PSS-G2, paging console
- 1x Vox-Net OUTPUT Node license

Wellness area:
- 1x DIVA8M, master unit
- 1x DPAfour250, digital power amplifier
- 1x BECS150, battery backup unit
- 1x PSS-G2, paging console
- 1x Vox-Net OUTPUT Node license

Accomodations:
- 1x DIVA8M, master controller
- 1x DIVA8S, Slave unit
- 2x DPAfour250, digital power amplifier
- 1x BECS150, battery backup unit
- 3x PSM-V2, paging console
- 1x Vox-Net OUTPUT Node license

3. Installation Requirements and Hardware description

3.1. Unpacking

DIVA8M G2T Package Content:

Opening the box you should find the following items:

- DIVA Master Unit
- Rack rounting brackets, 2 pcs
- Metal screws Philips M3x6, 6 pcs
- 12-way euroblock connectors, 1 pcs
- 10-way euroblock connectors, 3 pcs
- 5-way euroblock connectors, 2 pcs
- 4-way euroblock connector, 11 pcs
- 230V/24 VDC power supply
- CD-ROM
- Fireman Microphone

DIVA8S Package Content:

Opening the box you should find the following items:

- DIVA slave Unit Rack rounting brackets, 2 pcs.
- Metal screws Philips M3x6, 6 pcs. 12-way euroblock connectors, 1 pcs.
- 10-way euroblock connectors, 3 pcs.
- 4-way euroblock connector, 10 pcs.
- 10-way mini euroblock connectors, 1 pcs.
- 2-ways mini euroblock connector, 1 pcs.
- 230 VAC power cable.

If you realize anything missing, please contact your distributor.

Rack mounting:

If needed, fit the rack mounting brackets to each side of the DIVA by using the 6 pcs Phillips M3x6 screws supplied with the package.

Sitting:

The DIVA unit takes a 2U 19'' rack space and generates little heat itself. Consider leaving enough ventilation space above and below the unit. Do not mount the DIVA directly above heat generating devices like power supplies or power amplifiers.

Power connection:

DIVA accepts 24 VDC power supply as well as 230 VAC power supply. In order to be EN54 compliant, use a BECS battery charger and power supply and connect it on a 4-way euroblock connector respecting the polarity.

3.2. EN-54 Installation Requirements

In order to comply with the EN-54 standard installation requirements, please carefully read the followings manuals:

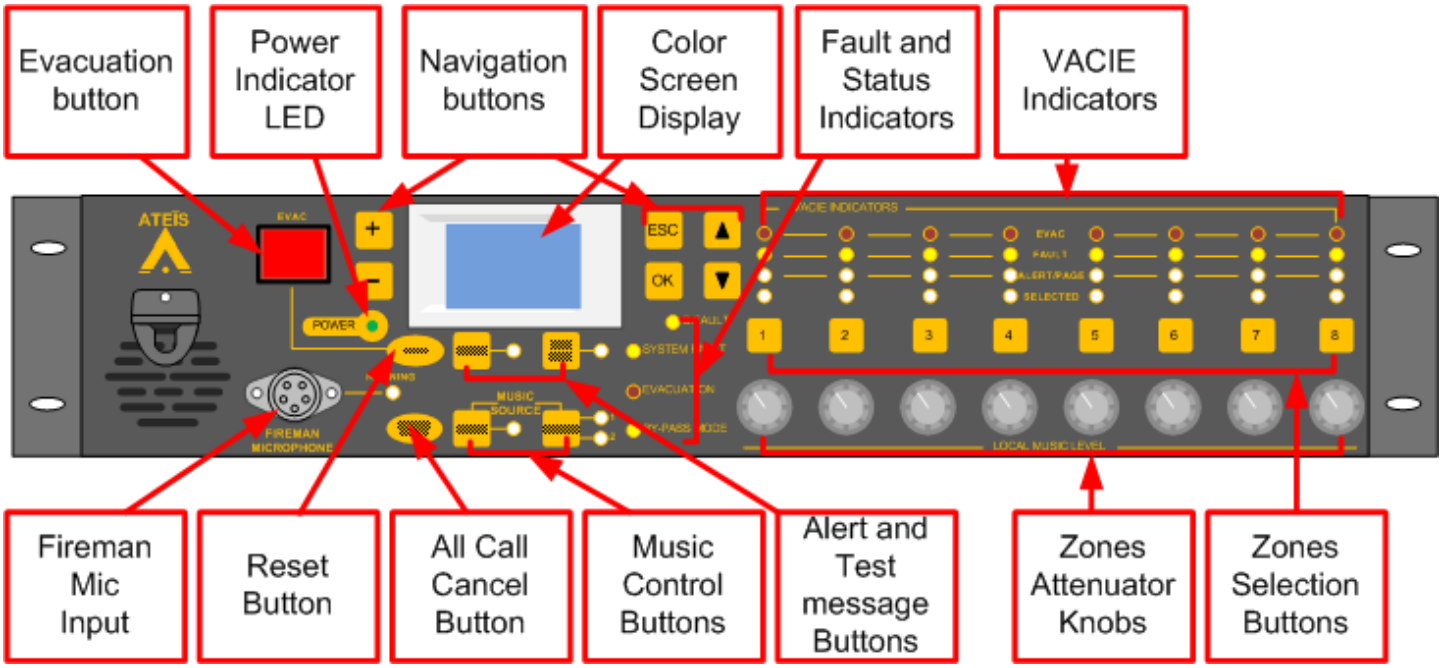
- BCS 150 user manual "BECS150-10UMS01-V01R01"
- DPA amplifiers series user manual "DPA-10UMS01-V01R01"
- PSSG2 user manual "PSSG2-10UMS01-V01R01"
- ID16 user manual "CD16-10UMS01-V01R01"

Those manuals can be downloaded from ATEIS websites or could be required from any branch office.

In order to fully understand all the DIVA system requirements regarding standards, please read also the following guides:

- DIVA8 service manual "DIVA8MG2-M/S-10SMS01-V01R01"
- DIVA8 VACIE reference "DIVA8MG2-M/S-10VRS03-V01R01"
- DIVA8 VACIE documents "DIVA8MG2-M/S-10VDS01-V01R01" and "DIVA8MG2-M/S-10VDS02-V01R01"
- DIVA8 system VACIE EN54-16 tesing guide "DIVA8 System VACIE EN54-16 testing guide"

3.3. DIVA8M Front View



From left to right and from up to down:

Evacuation button:
Initiates the evacuation process in manually selected or pre-defined zones.

Power indicator LED:
Indicates the power status of the DIVA.

Navigation buttons:
Plus, minus, ESC, OK, up arrow and down arrow buttons allows the navigation inside menus.

Color screen:
The screen displays all status information, menus and date/time.

Faults and status indicators:
There are four mains status LED on the DIVA front panel:
- G.Fault
- System Fault
- Evacuation
- By-Pass Mode

Vacie indicators:
There are eight rows of 4 LEDs that show in real-time mode the zones' status:
- EVAC
- FAULT
- ALERT/PAGE
- SELECTED

Integrated monitoring speaker:
The DIVA integrates a front panel monitoring speaker that can monitor different audio sources (software configuration).

Fireman Mic input:
Monitored fireman microphone input.

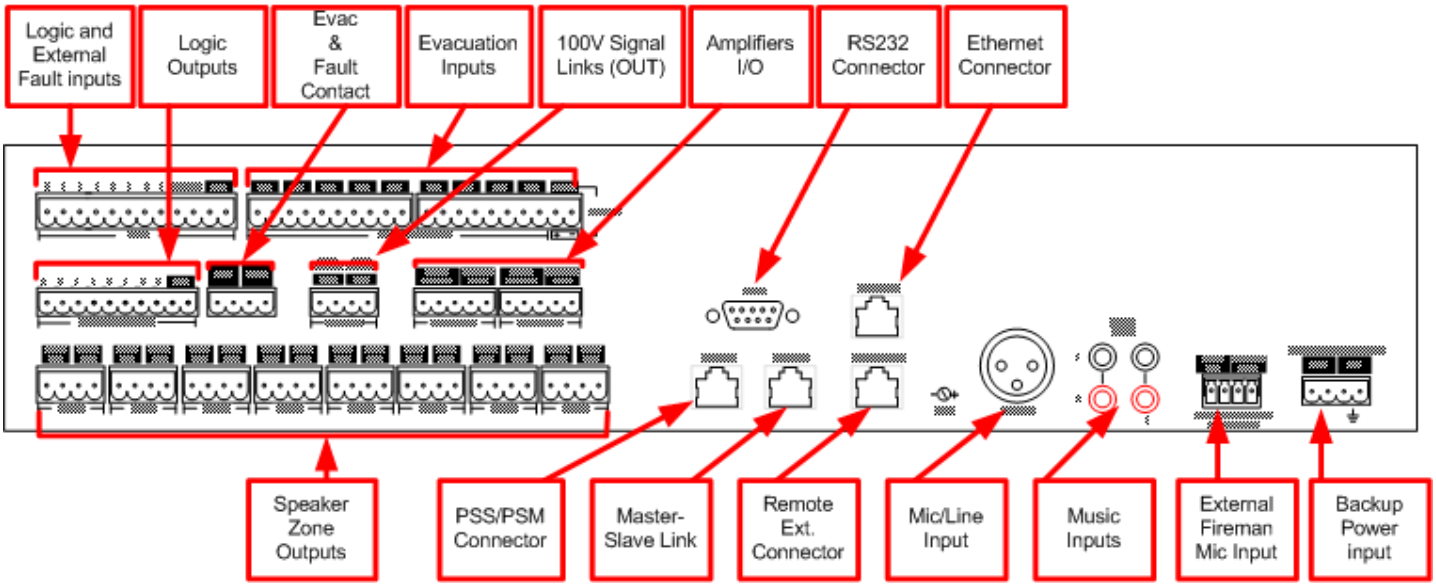
Reset button:
Generates a global software reset (machine reboot).

All Call/Cancel button:
Selects all zone in the system or reset the current zone selection.

Music control buttons:
The "ROUTE" button validate the zone selection. "SELECT" button permit to toggle between music source 1, 2 or none. The two music source indicators light when the corresponding source is used.

Alert and Test message buttons:
Starts messages in manually selected zones or in pre-defined set of zones.
Zone attenuator knobs:
Eight zone signal attenuators are available on the master DIVA8. Independent zone music level can be set for the eight master zones.
Zone selection buttons:
Select or deselect zone for manual routing.

3.4. DIVA8M Rear View



Logic and external fault inputs:
There is eight logic inputs that are two states input (open contact, close contact).

External faults input are normally reserved to connect security devices like monitored power supply. Those two inputs can be used to put DIVA into a security mode, security mode will be discussed in the event chapter.
Logic output:
Eight Logic outputs to send a pulse or a static closing/opening to an external device.
Evac & Fault contacts:
Evac and fault output contact reflect the evacuation status and the general fault status of the DIVA system.
Evacuation inputs:
Evacuation inputs are contact inputs that allows the monitoring of external contact. They also can be used in UGA mode, trigger by a voltage polarization change. This connector supplies a 24VDC source.
100V Signal links:
100V output to send 100V signal to others DIVA(M or S) unit.
Amplifiers I/O:
Voice Amp connector include the 0dB channel to power amplifier and the 100V audio channel from power amplifier. Same for Music Amp. Music amplifier channel will be used, in case of defect on the Voice amplifier channel, as a backup amplifier channel.
RS232 Connector:
SUBD-9 connector that includes two RS232 ports.
Ethernet Connector:
RJ-45 Connector to link the DIVA master to the ethernet network for software configuration and/or to enable IP paging.
Speaker zone outputs:
Eight speaker zone connectors splitted in A and B line.
PSS/PSM connector:
RJ-45 connector to link PSS or PSM call-stations.
Master-Slave link:
RJ-45 connector to create a master-slave DIVA system.
Remote Ext. connector:

not used.

Mic/line input:

XLR connector to plug a microphone or a third line level audio source.

Music inputs:

Cinch connectors to plug two different 0dB audio sources.

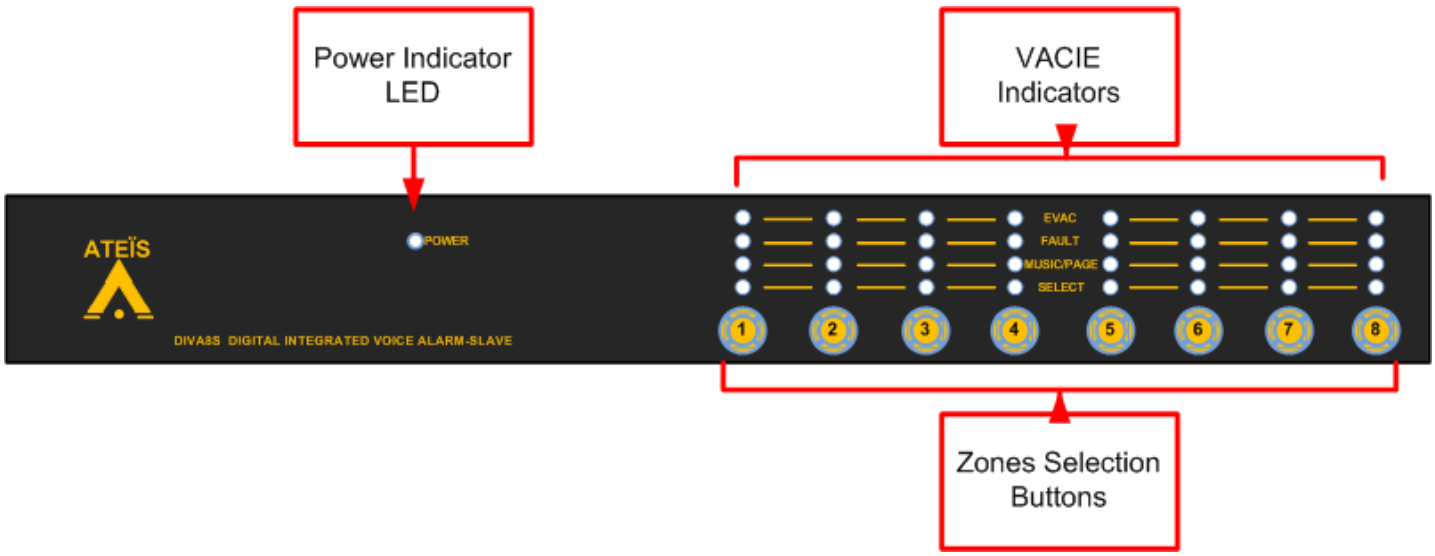
External fireman mic. input:

A replica of the front Fireman Microphone connector.

Backup power input:

24VDC power supply for battery operation.

3.5. DIVA8S Front View



Power indicator LED:

Indicates the power status of the DIVA.

Vacie indicators:

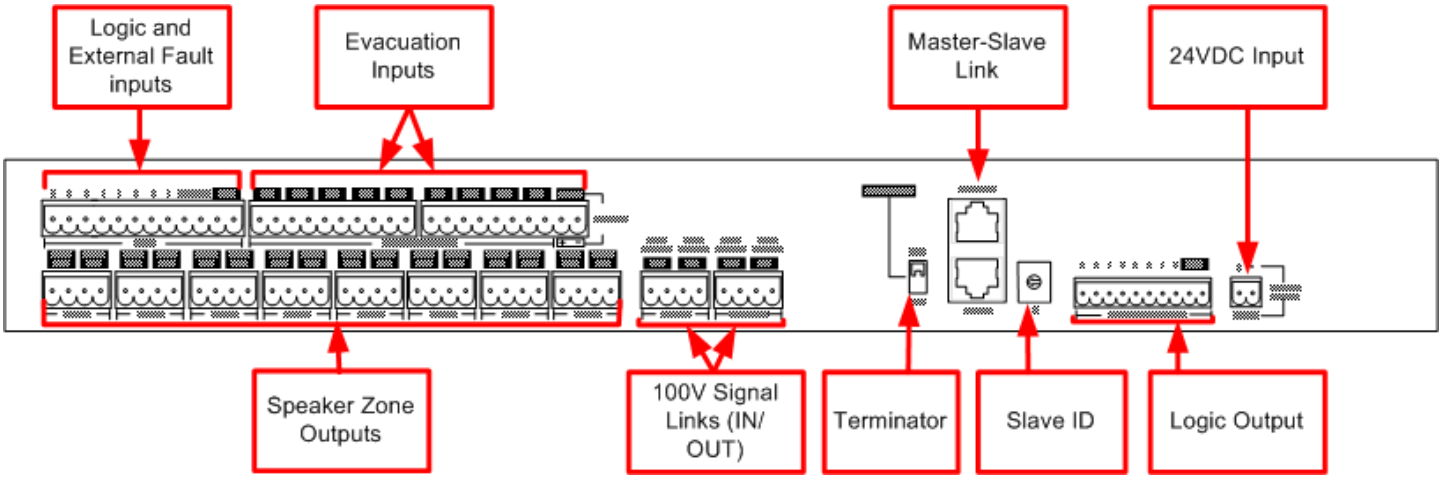
There are eight rows of 4 LEDs that show in real-time mode the zones' status:

- EVAC
- FAULT
- ALERT/PAGE
- SELECTED

Zone selection buttons:

Select or deselect zone for manual routing.

3.6. DIVA8S Rear View



Logic and external fault inputs:

There is eight logic inputs that are two states input (open contact, close contact).

External faults input are normally reserved to connect security devices like monitored power supply. Those two inputs can be used to put DIVA into a security mode, security mode will be discussed in the event chapter.

Evacuation inputs:

Evacaution inputs are contact inputs that allows the monitoring of external contact. They also can be used in UGA mode, trigger by a voltage polarization change. This connector supplies a 24VDC source.

Master-Slave link:

Connectors to create a master-slave DIVA system.

24VDC input:

24VDC power supply for battery operation.

Speaker zone outputs:

Eight speaker zone connectors splitted in A and B line.

100V Signal links:

100V input to receive 100V signal from an amplifier connected to another DIVA(M or S) unit. 100V output to send 100V signal to others DIVA(M or S) unit.

Terminator:

This switch define the end of the Master-Slave system.

Slave ID:

This rotary switch is used to set an ID to each Slave in the system.

Logic output:

Eight Logic outputs to send a pulse or a static closing/opening to an external device.

4. External Devices

This chapter will quickly describe the external devices that could be connected to a DIVA unit. It won't speak about external contact or button that also could be used.

For more information about those devices, please visit ATEÏS website.

4.1. Fireman Microphone

The Fireman Microphone SHM 1 is a small compact microphone dedicated to security calling. It is a totally monitored microphone with internal resistor network to detect four different states (Shortcut, Closed Contact, Open Contact, Absent). Firemen Microphone SHM 1 for All call, group or zone calls. The EN-54 surveillance is realised thanks to the DIVA internal circuitry.

4.2. PSS

The PSSDT touchscreen paging microphone can be configured either using a PC computer, or by using control keys and the front LCD screen of the SINAPS module to which it is connected. Access can be password-protected.

All parameters needed for site operating can be programmed: zones assigned to the different buttons, name of zones, zone groups, priorities, access to different messages, levels adjustments, pre-call chime, press-to-talk, music ON/OFF and music routing.

Its large LCD screen provides an overall view of busy zones and active sources. A VU meter controls the microphone presence and modulation level.
A built-in loudspeaker makes it possible to listen to all system-generated messages and announcements.

The PSSDT console is SINAPS security system interface and is fully monitored (microphone capsule, power supply, touchscreen, audio and RS485 connections). Any system faults are detected, located and indicated clearly on the screen.

Different product references are available to suit all site sizes:

PSS849: 4 zones for SINAPS-Compact (IDA4)
PSS12DT: 12 zones for SINAPS-M, SINAPS-XM and DIVA8M
PSS24DT: 24 zones for SINAPS-M, SINAPS-XM and DIVA8M

PSS48DT: 48 zones for SINAPS-M, SINAPS-XM and DIVA8M
PSS72DT: 72 zones for SINAPS-M, SINAPS-XM and DIVA8M
PSS96DT: 96 zones for SINAPS-M, SINAPS-XM and DIVA8M

4.3. PSM

Unidirectional Condenser Addressable Microphone, compatible with IDA8C, IDA8S, IDA4 series and DIVA devices via RS485 protocol over a single CAT5 cable connection to transport both Audio and Power to the PSMxx from the IDAxx/DIVA system.The unit comprises of 8 zones / 8 buttons with sleek condenser gooseneck microphone, and spring metal protection, providing durability and excellent aesthetics as well as allowing up to 256 zones expansion via the additional Keypad easy extension station. The buttons can represent a single zone or a group of zones and are easily defined via the GUI of the IDAxx/DIVA system using a simple Matrix selection.

The unit offers “Hold” and “Busy” LED signals in addition to the zone LED’s, and these allow the easy identification of selection / Busy signals for the user.

All buttons can be freely programmed from software and each button can be programmed for Push To Talk or Latch functionality. The unidirectional condenser microphone means high quality directive pick up from the user and hence less interference from the surroundings thanks to the cardioid polar pick-up pattern.

The IDAxx system can accommodate up to 64 PSMs in the system and up to 10 PSMs on one IDAxx and up to 256 zones in total. DIVA only allows 10 PSMs in the system. The RS485 communication protocol offers daisy chaining of up to 1000 m on a simple CAT5 cable, and yet makes outlets easy to connect via a standard RJ45 connectors.

4.4. JB (Junction Box)

Easy chain-connection of LAP peripherals (URC and PPM) or VACIE peripherals (PSM, CD16) using standard shielded CAT5 cables.

KEY FEATURES:

- 5 x RJ45:
  - Connection to previous JB (or LAP bus on the first JB, Call stations bus on VACIE system)
  - RS485-SIDE for URC connection
  - Easy connection to a Master PPM using the supplied 10 pins cable.
  - Connection to first Slave PPM/PSM (Slave features are not available on PPM and CD16)
  - MAIN OUT connection to next JB
- 2 internal screw connectors for 0 dB audio:
  - audio output from PPM/PSM/CD16 microphone --> Audio Output (not used with PSM/CD16)
  - audio input to PPM speaker --> Audio Input (Not used with PSM/CD16)
- 1 input for additional 24V power supply. (Depending on distance between LAP and PPM/URC or PSM/CD16 to the VACIE, you will have to put an external power supply)
- 1 internal switch for PPM/PSM/CD16 Master or Slave selection. (Slave features are not available PPM and CD16)
- 1 internal switch for System or Local power supply selection.

4.5. PSSG2

The PSS -G2 Touch paging microphone console is a man-machine interface which allows paging call, messages broadcasting and DSP matrix parameter control. DIVA8G2T can handle one PSS-G2 unit connected to a secured bus. Its back-lit touch screen is designed for simple and user-friendly operating. Various operating levels with password protection make the PSS-G2 a versatile device that fits well in a commercial shopping center as for an industrial high security environment.

All paging parameters needed for site operating can be programmed: zones assigned to the different buttons, name of zones, group of zones, messages triggering, levels adjustments and pre-call chime but also for fader control, button control or event control.

A total of twelve keys on fourteen pages allow zone or group of zones selections. Each key contains a color changing field indicating that the zone is occupied by a different process.

For more information about how to use the PSSG2 microphone console, please read the PSSG2 user manual and the "How to use PSSG2 microphone" chapter.

4.6. PSSG2-E

The PSS -G2E TCP/IP Touch paging microphone console is a man-machine interface which allows IP paging call, messages broadcasting and DSP matrix parameter control. DIVA8G2T can handle up to 8 PSS-G2E units connected to an Ethernet network. Its back-lit touch screen is designed for simple and user-friendly operating. Various operating levels with password protection make the PSS-G2E a versatile device that fits well in a commercial shopping center as for an industrial high security environment.

All paging parameters needed for site operating can be programmed: zones assigned to the different buttons, name of zones, group of zones, messages triggering, levels adjustments and pre-call chime.

A total of twelve keys on fourteen pages allow zone or group of zones selections. Each key contains a color changing field indicating that the zone is occupied by a different process.

For more information about how to use the PSSG2-E microphone console, please read the PSSG2-E user manual and the "How to use PSSG2-E microphone" chapter.

4.7. CD16

Wall-mount heavy duty remote paging console with Access level 2 protection to comply with the EN 54-16. Compatible with DIVA8 System, IDA4 System and IDA8 System and communicates over a dedicated RS485 for Power, audio and DATA.

The unit comprises of 16 zones / 16 buttons with fist firemen's microphone in a metal surface mount wall-box. It provides robust IP-30 protection. Each CD16 contains a PSM-Master PCB with extension keypad and uses the same architecture as for the PSM-series of microphone consoles. DIVA8 System can handle 1 CD16 when each IDA4 System and IDA8 System can handle up to 32 CD16 units.

The buttons can represent a single zone or a group of zones. All buttons can be programmed with drag & drop features from the DIVA8 System, IDA4 System and IDA8 System GUI and the PTT button can be programmed for Push To Talk or for latching functionality.

The unit offers “Hold” and “Busy” LED signals in addition to the zone LED’s, and these allow the easy identification of selection / Busy signals for the user. In addition, to comply with EN 54-16, separate POWER, FAULT and EVAC indicators are provided.

Additional RCA connectors with selection buttons support local audio injection for commercial usage.

The RS485 communication protocol offers daisy chaining of up to 300 m on a simple CAT5 cable, and yet makes outlets easy to connect via a standard RJ45 connector.

For more information about how to use the CD16 microphone console, please read the CD16 user manual and the "How to use CD16 microphones" chapter.

5. Software Installation

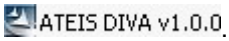
As briefly mentioned in the Installation paragraph, DIVA8M package hold a CD-Rom. The CD contain the DIVA8M Quick Start Manual (.pdf), User Manual (Microsoft® HTML Help Executable .chm, HTML .htm). and DIVA software.

It could happen that the software on the CD-Rom is not the last release. In that case, please visit ATEÏS website to download the latest release and follow the steps described in the Software Installation Process.

5.1. Installation Process

Insert the CD-Rom in your computer.

Double Click on the "My Computer" on the desktop. Open the CD-ROM submenu.

Double Click on the DIVA software icon 

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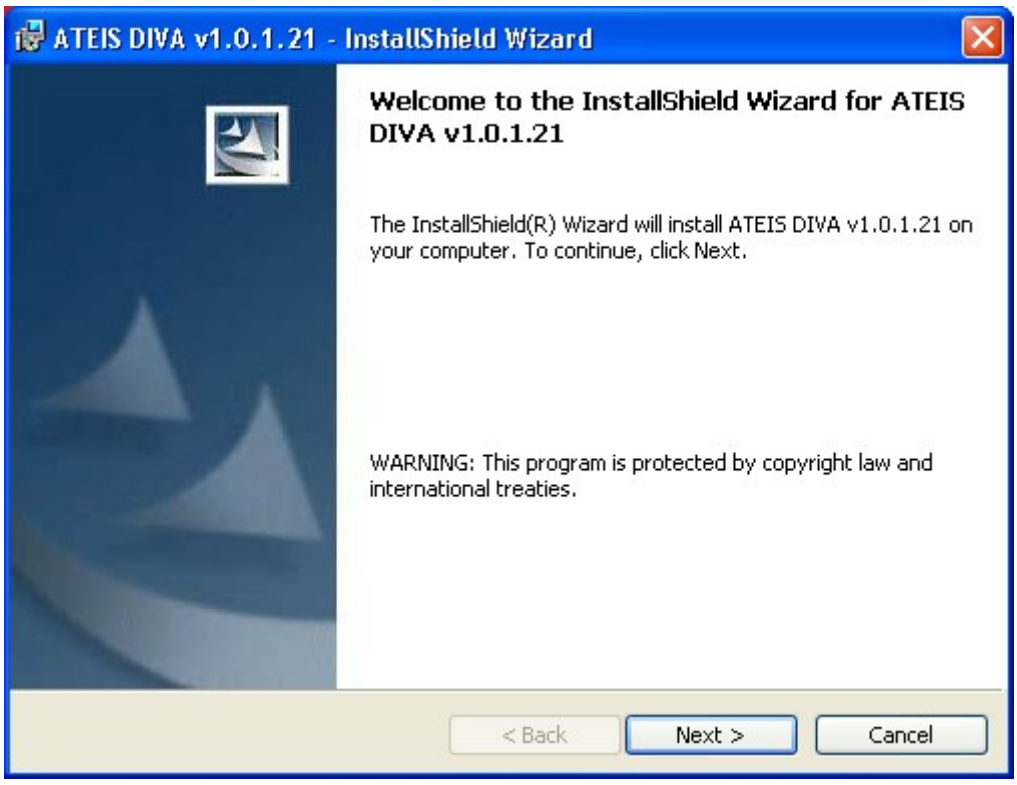
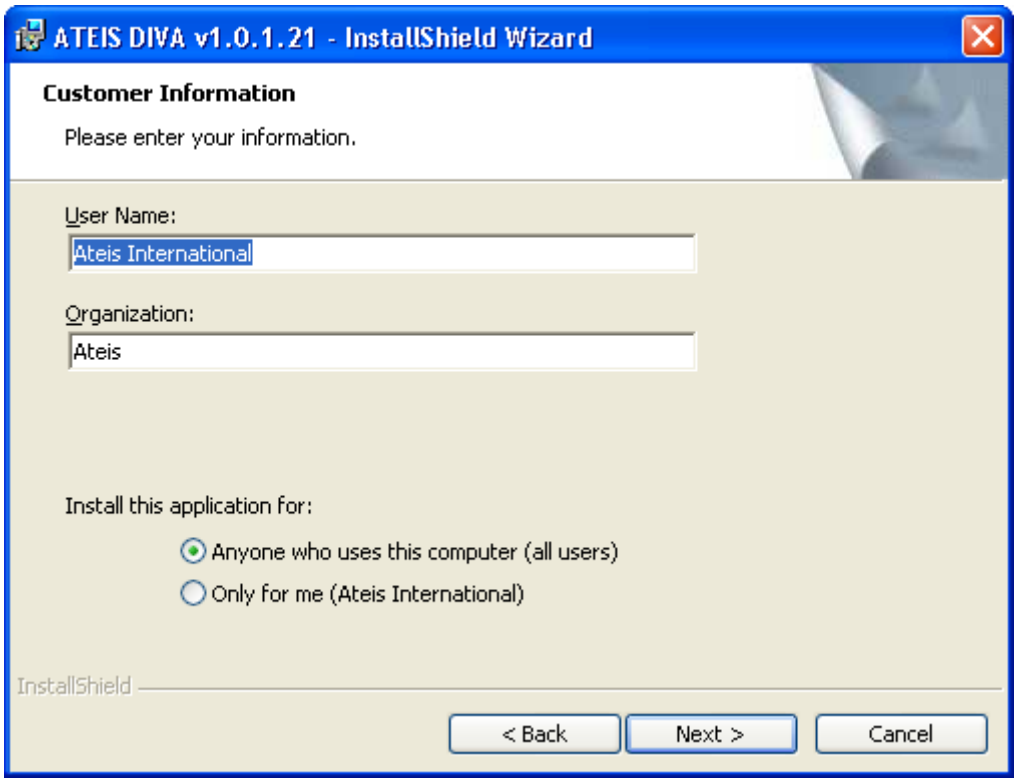
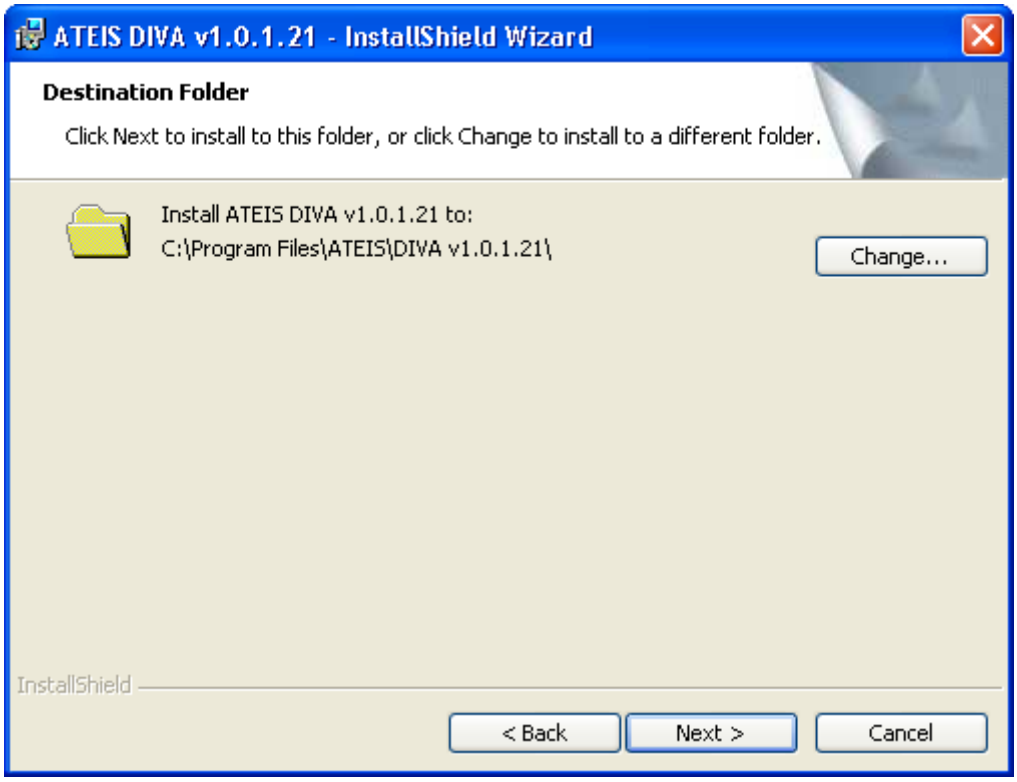
The DIVA installshield wizard will prompt. Please follow the install instruction that are displayed.


ATEIS DIVA v1.0.1.21 - InstallShield Wizard
Welcome to the InstallShield Wizard for ATEIS DIVA v1.0.1.21
The InstallShield(R) Wizard will install ATEIS DIVA v1.0.1.21 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

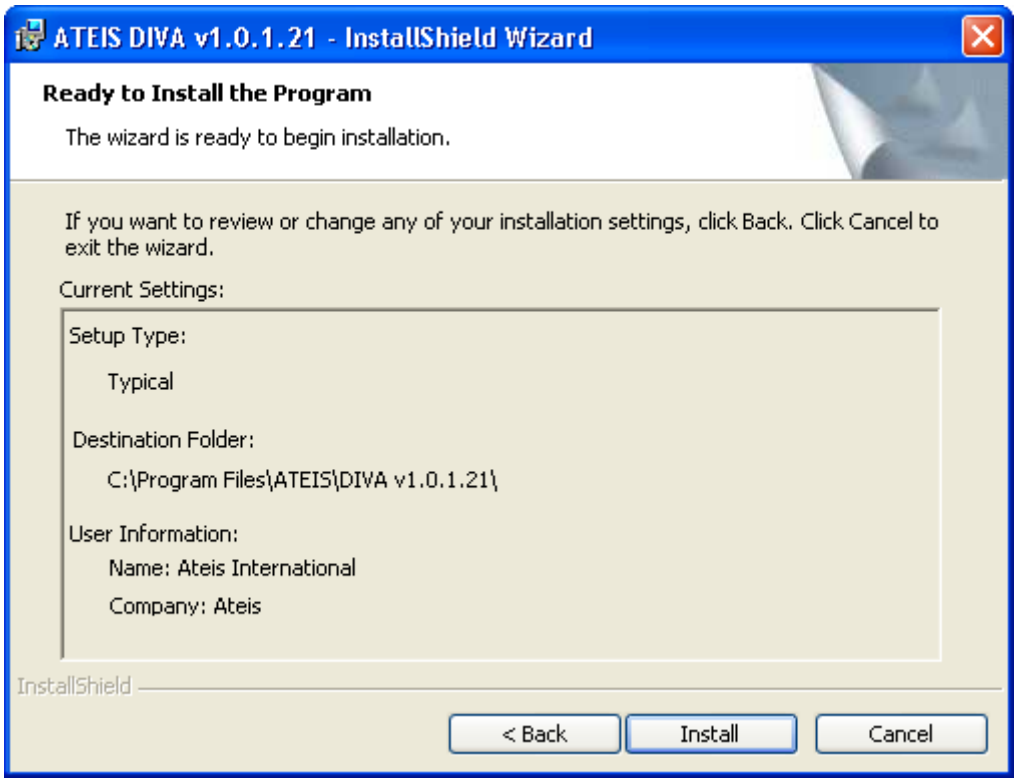
Change the User Name and the Organization's name at your convenience.



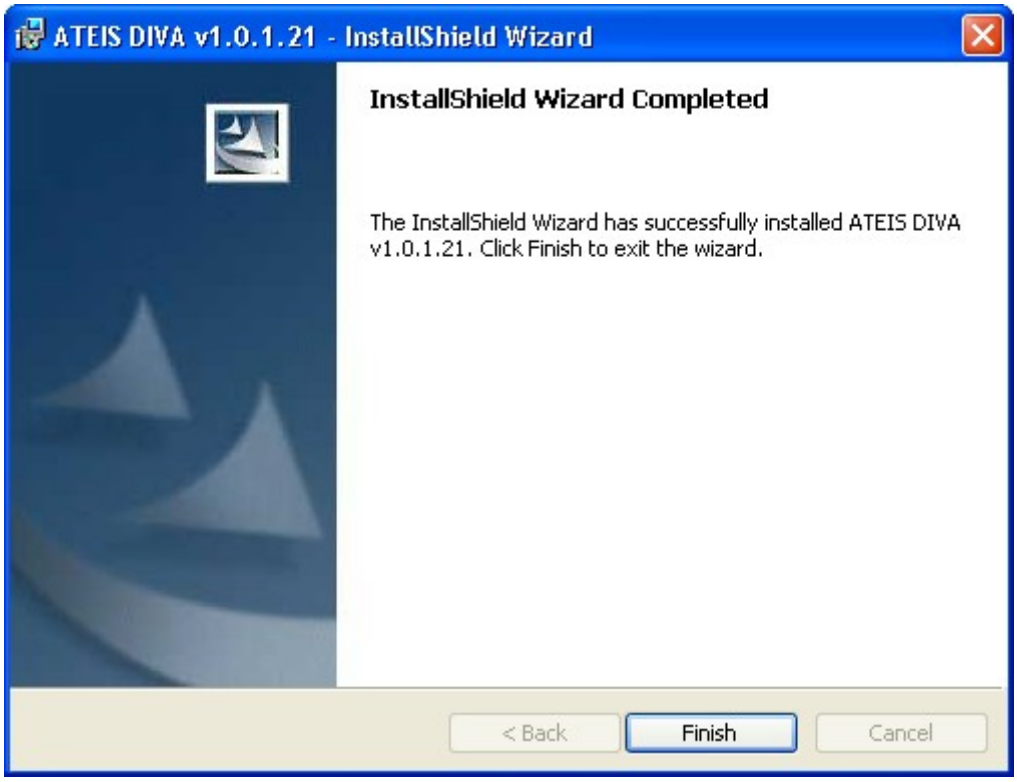
Choose an installation folder, by default, it will be install in C:\Program Files


ATEIS DIVA v1.0.1.21 - InstallShield Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install ATEIS DIVA v1.0.1.21 to:
C:\Program Files\ATEIS\DIVA v1.0.1.21\
Change...
InstallShield
< Back
Next >
Cancel

Then launch the installation process by clicking "Install".



To finish the Installation process, just click "Finish".


ATEIS DIVA v1.0.1.21 - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed ATEIS DIVA v1.0.1.21. Click Finish to exit the wizard.
< Back
Finish
Cancel

The installation process will automatically create a Desktop Icon like the one under.

5.2. Uninstall

To uninstall a current version of the DIVA software, please follow the next few steps:

Click on "start" -> "Program" -> ATEIS -> DIVA -> ATEIS DIVA v1.0.0-Uninstall

Windows Installer will ask you if you are really sure to remove this program, click "Yes".

5.3. Software Upgrade

In case of a new release of the DIVA software:

Please go to the ATEÏS website in order to download the last software version.

Before installing the new software, please uninstall the current version.

Double click the new software version icon.

Follow the installation process.

6. DIVA Software Presentation

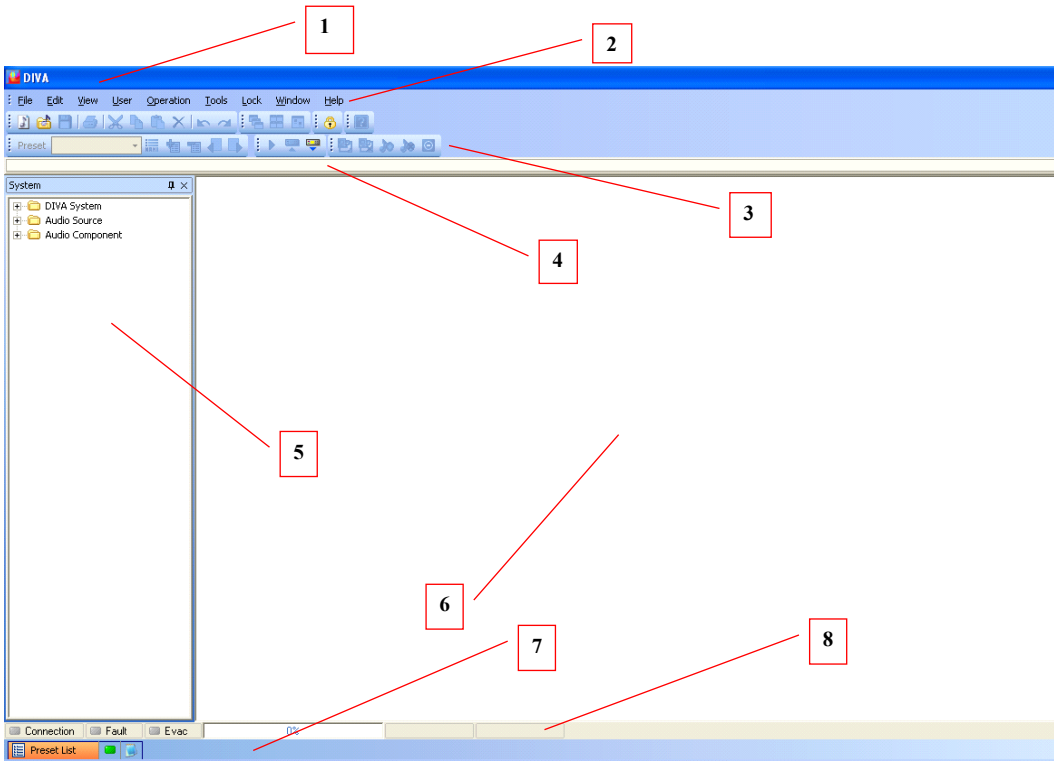
The chapter will introduce to you the DIVA software. This is a visual presentation in order to let you know where you can find the needed tools.

After installing the DIVA software, you can access it:

- Either by double-clicking on the Desktop icon:

- Or by start -> program files -> Ateis -> ATEIS DIVA v1.x.x.

The DIVA software starts with no file loaded and a blank worksheet looking as follow:



Startup View Elements:

(1)	Title Bar	Displays the path name of the active file.
(2)	Menu Bar	Holds the main menu commands arranged into functionality groups.
(3)	Toolbars	Toolbar items act like a shortcut to their corresponding menu command.
(4)	Tab Bar	Shows the window title of all open design and component control windows for quick access.
(5)	Design Component Section	Holds all design component libraries.
(6)	Design View Area	This area is your work space showing all design windows and component control windows.
(7)	Property Control Section	This section slides up for 'System Status', 'LED Display'.
(8)	Status Bar	Displays useful status, communication and compiler information.

6.1. Title Bar

The title bar displays 'DIVA', 'Untitled' if you start a new system design, or the full path name of the saved file. At the right hand corner you can find the usual Windows minimize button and the close box, which exit the program.

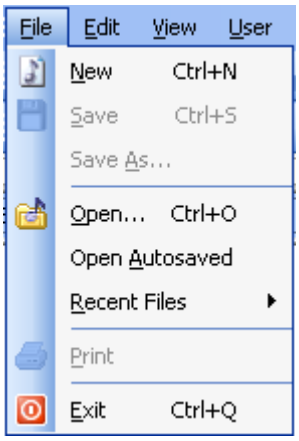
6.2. Main Menu Bar

The main menu bar contains the following menus:

- File
- Edit
- View
- User
- Operation
- Tools
- Lock
- Window
- Help

6.2.1. File

In this paragraph, you will find everything related to system files as well as printing command. All the DIVA files are saved under the .diva extension.



- **New:** Opens a new system file
- **Save:** Saves the current system file
- **Save as:** Opens the 'Save As...' dialog window to choose file path and name
- **Open:** Opens the 'Open...' dialog window to choose an existing file path and name
- **Open autosaved:** Opens the last automatically saved file
- **Recent files:** Pathname>> Quick access to recently used files

_____

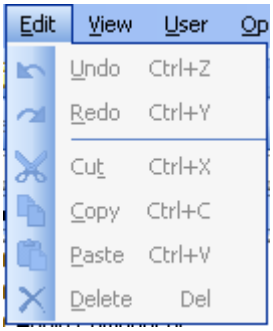
- **Print:** Starts printing

_____

- **Exit:** Terminates the current DIVA session after asking to save modified files

6.2.2. Edit

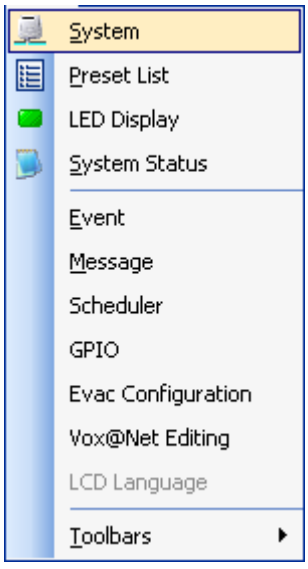
Here you will find all the common basic edition tools of windows based software.



- **Undo/ctrl+z:** Will undo the last actions
- **Redo/ctrl+y:** Will redo the last action or will retrieve the last state in case undoing too far
- **Cut/ctrl+x:** Cuts out the active selection and copies it to the operating system's clipboard
- **Copy/ctrl+c:** Copies the active selection to the operating system's clipboard
- **Paste/ctrl+v:** Pastes the content of the operating system's clipboard
- **Delete/Del.:** Deletes the active selection

6.2.3. View

The commands in this group are used to call closed or invisible control windows and toolbars.



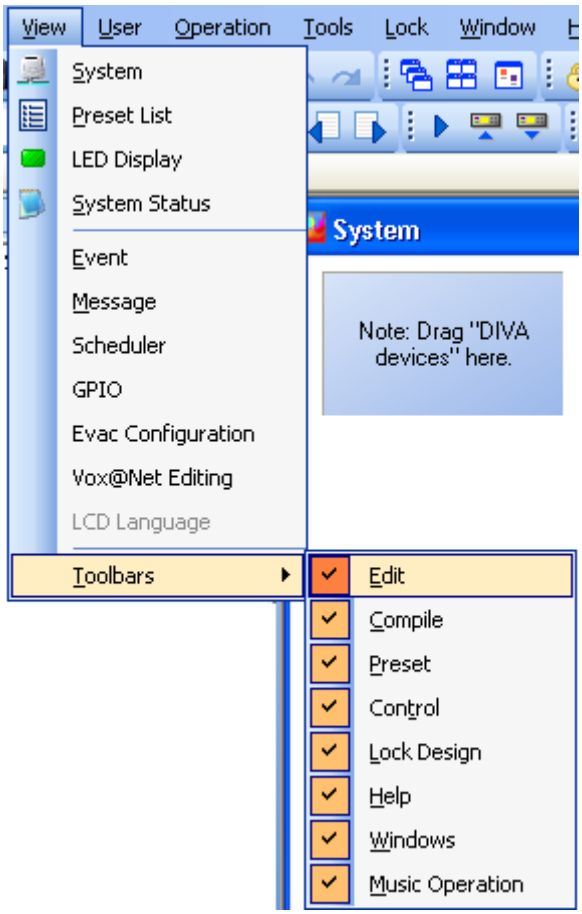
- **System:** opens the Design Component Section sub-window.
- **Preset List:** opens the preset list sub-window, see Property Control Section.
- **LED Display:** opens the sub-windows where the front panel LEDs are replicated, see Property Control Section.
- **System Status:** open the system sub-window where all the related logfile action can be found, see Property Control Section.

- **Event:** opens the Event Manager window, see how to use events.

- **Message:** opens the Message Manager window, see how to add messages into DIVA.
- **Scheduler:** opens the Scheduler window, see how to use the scheduler.
- **GPIO:** opens the logic inputs/outputs configuration window, see how to use logic inputs.
- **Evac Configuration:** Opens the Evac configuration window, see how to use evac configuration.
- **Vox@Net Editing:** opens the Vox@Net editing window, see how to put DIVA in Vox@Net
- **LCD Language:** under construction

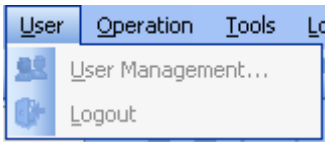
_____

- **Toolbars:** Within this menu subgroup, you'll find all the toolbars available in DIVA software.
  > Edit
  > Compile
  > Preset
  > Control
  > Lock Design
  > Help
  > Windows
  > Music Operations



6.2.4. User

Here you are able to manage the user right: add users with a password and restrict access only to needed features.

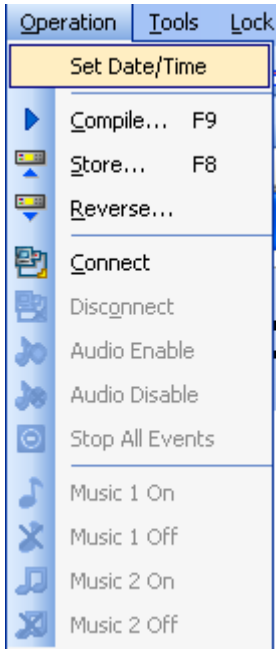


- **User Management:** Calls the 'User Management' window to set up users or user groups and their individual privileges
- **Logout:** Opens the 'User Login' window

For more information about the user management, see how to use the user management.

6.2.5. Operation

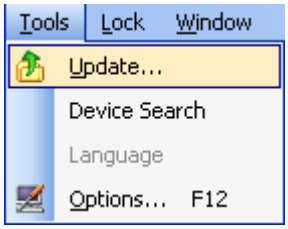
Here you can find all data communication commands.



- **Set Date/Time:** Allow user to set the time and date of the DIVA unit
- **Set Store Password:** Offers a store process protection, password management
- **Compile:** Compiles the current configuration and displays eventual errors
- **Store:** Upload configuration parameter into the DIVA's parameter memory
- **Reverse:** Downloads the DIVA configuration in the computer
- **Connect:** Establishes data connection to the machine(s) in order to monitor or adjust parameters online
- **Disconnect:** Disconnects DIVA software from the machine(s)
- **Audio Enable:** Enables DIVA's audio processing
- **Audio Disable:** Disables DIVA's audio processing
- **Stop All Events:** Stops all running events
- **Music 1 On:** enable music sources one routing
- **Music 1 Off:** disable music sources one routing
- **Music 2 On:** enable music sources two routing
- **Music 2 Off:** disable music sources two routing

6.2.6. Tools

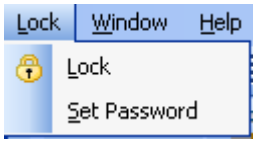
Here you will find command related to communication with DIVA units.



- **Update:** Will update the DIVA Firmware to the one corresponding to your current software version, see how to update DIVA. **NOTE: Upgrading from a too old version to the current one could cause configuration files compatibility issues.**
- **Device Search:** Will search and display all the DIVA Master IP connected to the TCP/IP network, see how to search device.
- **Language:** under construction.
- **Options:** Will open the Options window in which you will be able to set network parameters, as well as software colour scheme and autosave function. See Pictures below.

6.2.7. Lock

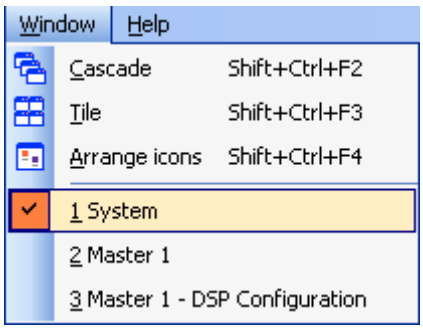
The Lock menu allow you to lock the software with a password in order to avoid another user to manipulate your configuration.



- **Lock:** Locks the software. Note: if no password were specified, every user can unlock the software
- **Set Password:** Offers the possibility to set a password for unlocking the software. If set, as soon as you press the unlock button, it will prompt you to enter the last password set

6.2.8. Window

This menu provides window arrangement commands, and quick access to open design or component control windows



- **Cascade:** Cascades the current opened windows
- **Tile:** Tiles the screen with the current opened windows
- **Arrange Icons:** Arranges Icons in a window where possible

---

Here you can find a list of all currently opened windows

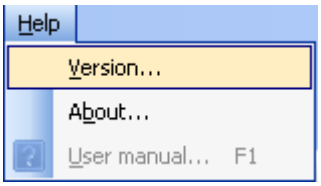
> System

> Master 1

> Master 1 - DSP Configuration

6.2.9. Help

Here you will be able to check that the software version corresponds to the one into DIVA units access to software information as well as the help user manual document.



- **Version:** Shows the software version and checks the DIVA units embedded version, see how to verify DIVA versions.
- **About:** Opens a information windows about copyrights, software release version, etc.
- **User Manual:** Opens the complete help user manual

6.3. Toolbars

In the DIVA software, the different toolbars offers shortcut to main menu items. Here are the list of them from left to right and up to down:

- **New Project:** Opens a new project
- **Open:** Opens existing project
- **Save:** Saves current project

- **Print:** Opens the print preview window. See "How to print project" to learn more about the printing options.

- **Cut:** Cuts out the active selection and copies it to the operating system's clipboard
- **Copy:** Copies the active selection to the operating system's clipboard
- **Paste:** Pastes the content of the operating system's clipboard
- **Delete:** Deletes the active selection

- **Undo:** Will undo the last actions
- **Redo:** Will redo the last actions or will retrieve the last state in case undoing too far

---

- **Cascade:** Cascades the current opened windows
- **Tile:** Tiles the screen with the current opened windows
- **Arrange Icon:** Arranges Icons in a window where possible

---

- **Lock:** Locks the software. Note: if no password were specified, every user can unlock the software

---

- **Help:** opens the user manual

- **Preset List:** allows choosing a preset in the exiting ones
- **Name:** allows modifying the names of the exiting presets
- **Add Preset:** Add a new Preset to the system. By default, the new preset is named "Untitled"
- **Delete Preset:** deletes the preset chosen in the Preset List
- **Preset Save:** allows saving new parameters to the preset in the Preset List
- **Preset Load:** allows loading the preset selected in the Preset List

---

- **Compile:** Compiles the current configuration and displays eventual errors
- **Store:** Upload configuration parameter into the DIVA's parameter memory
- **Reverse:** Downloads the DIVA configuration in the computer

---

- **Connect:** Establishes data connection to the machine(s) in order to monitor or adjust parameters online
- **Disconnect:** Disconnects DIVA software from the machine(s)
- **Audio Enable:** Enables DIVA's audio processing
- **Audio Disable:** Disables DIVA's audio processing
- **Stop All Events:** Stops all running events

- **Music 1 On:** Unmutes the music sources one
- **Music 1 Off:** Mutes the music sources one
- **Music 2 On:** Unmutes the music sources two
- **Music 2 Off:** Mutes the music sources two

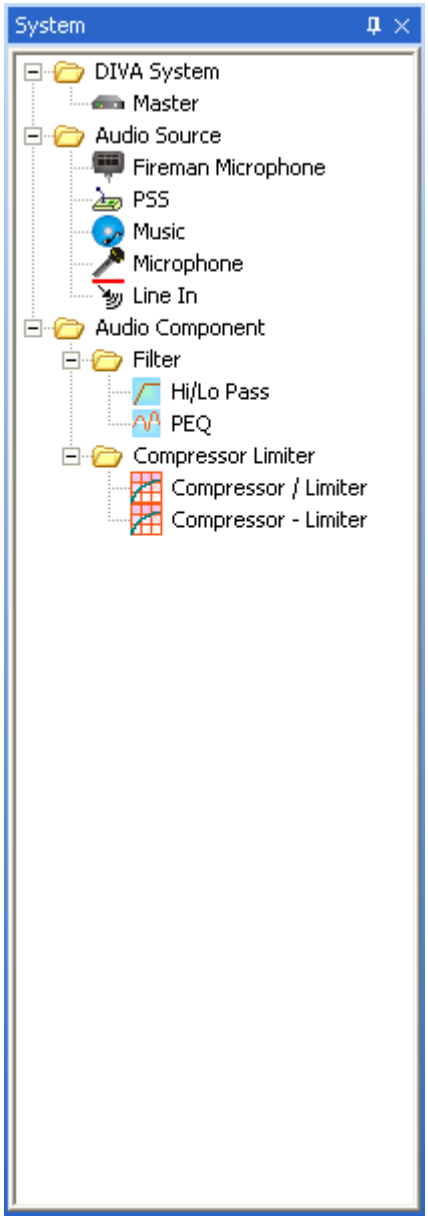
6.4. Tab Bar

Opening design or component control windows creates a new tab within the tab bar. The active window is orange highlighted and can be closed by clicking the close box at the right side of the bar.

As the tab bar gets full, additional orange colored arrow control boxes will appear at the right side of the tab bar. Click on the left or right arrow to move the content of the tab bar to the left or the right.

6.5. Design Component Section

The Design Component Section shows, in a tree folder arrangement, all element that can be connected or added in a DIVA configuration. All the component are drag and drop component, errors are avoid thanks to the emplacement identification. See How to Add Design Component.

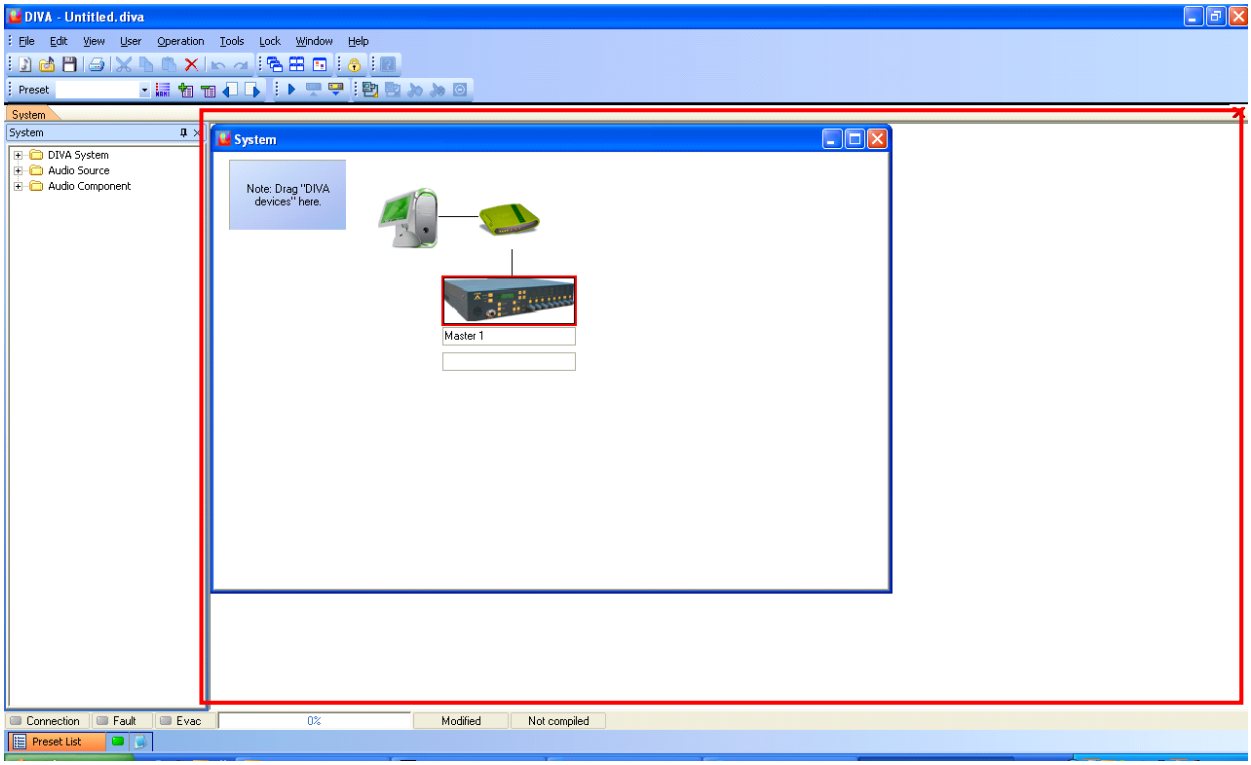


- **DIVA System:** In the DIVA System folder, you will find DIVA Master unit icon. See How to Add Design Component
- **Audio source:** In Audio Source folder, you will find audio elements that can be connected to a master DIVA unit.
  >Fireman Microphone: see How to use a Fireman Microphone
  >PSS: see How to Use PSS Microphone
  >Music: see How to Use Music Source
  >Microphone: see How to Use MIC/LINE Input
  >Line In: see How to Use MIC/LINE Input
- **Audio Component:** Audio Component contains high/low pass filters, PEQ equalizer and compressor limiter components.
  >Hi/Lo Pass: see How to Use Filters
  >PEQ: see How to Use PEQs
  >Compressor/Limiter: see How to Use Compressor/Limiter
  >Compressor - Limiter: see How to Use Compressor - Limiter

6.6. Design View Area

In this area, you will:

- Develop your DIVA configuration (see the How To chapter) and DIVA master network (see How to perform a DIVA master Network)
- Access the monitor window, see How to Use Monitoring
- Access to DIVA element and their adjustments



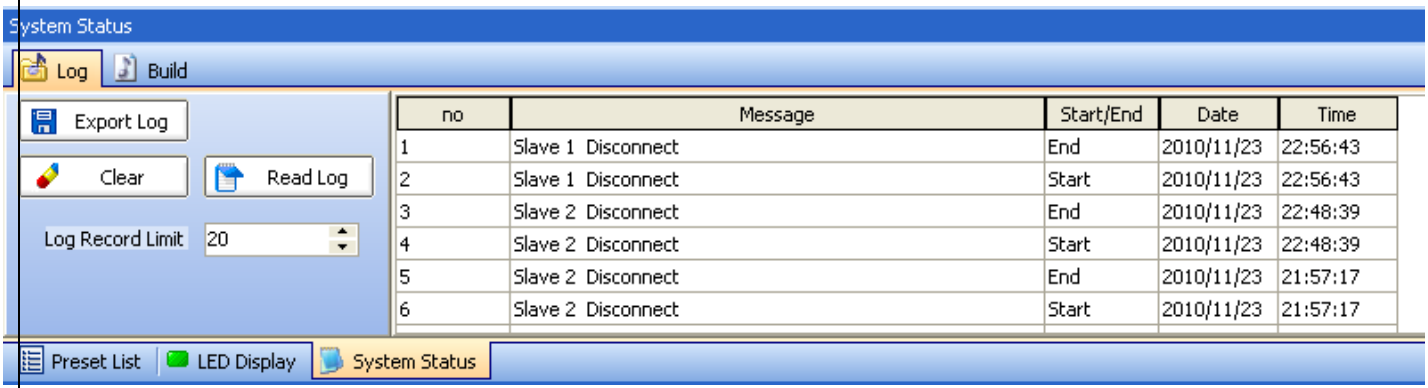
6.7. Property Control Section

In this section you can find several control windows docked together into a sliding control panel. You can look at the different control windows by bringing the cursor over their tabs at the bottom of the very bottom of the main window. The corresponding control window will slide up allowing you to quick-examine or quick-modify settings without selecting it from the Menu Bar.

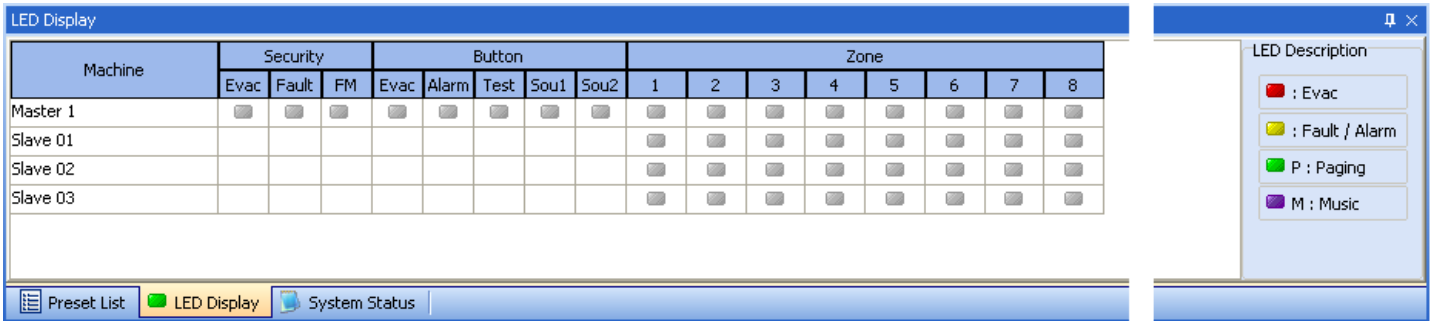
The control panel will automatically slide down again if you move the cursor out of it's space giving again the whole view to the Design View Area.

The two accessible sub-bar windows are listed below:

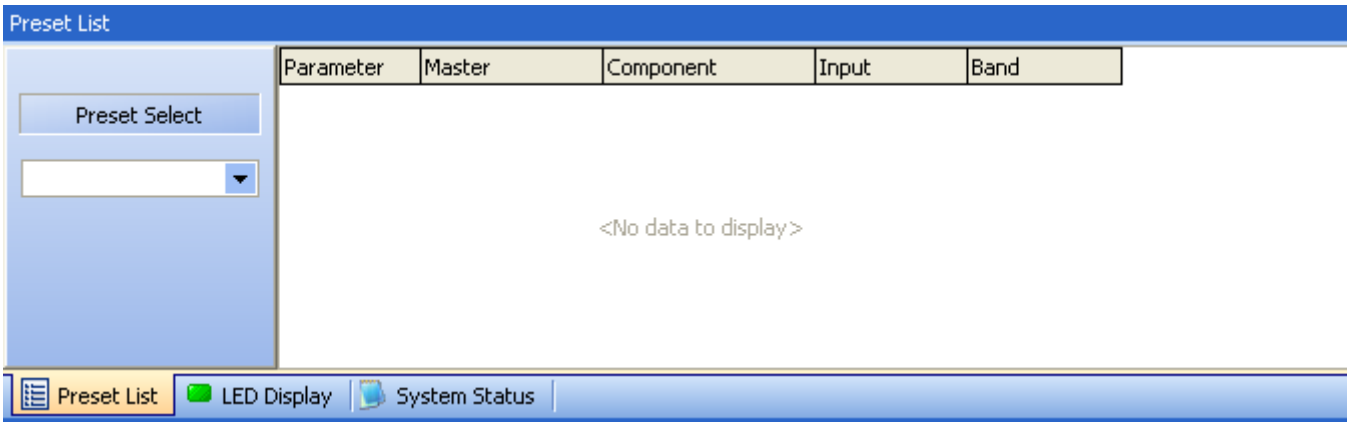
- **System Status**: Gives access to Log files management as well as project build historic



- **LED Display**: offers real time status LED display, only if connected to DIVA units. It is a replic of the front panel LED display



- **Preset List:** shows all parameters controlled in the preset selected (drop-down menu).



6.8. Status Bar

The status bar shows quick look status information about:

- **Connection:** Lights up when real time connected to DIVA
- **Fault:** Lights up when a faults status is detect onto DIVA
- **Evac:** Lights up when a Evac state is detected
- **Login:** shows in which user level you are logged in.

Additional Status Information

- **Timeline:** Shows the progress of commands like opening component control windows
- **Modified:** Indicates if the current file has been modified since last save
- **Compiled:** Indicates if the current file has been compiled or not

7. DIVA Philosphy

DIVA8-G2T system, combined with DIVA8S, is capable of stand alone operation that complies with security/evacuation demands. However it offers more than just stand alone features, such as complete software control and third party communication through pre-defined protocols.

DIVA8-G2T philosophy needs to be explain in order to clarify the manual structure as well as the software configuration process.

Software:

Before anything can be achieved from a DIVA8-G2T system, you need to create a software configuration that

reflects the hardware connected to the system and operations like paging, message playing.

The software also allows the management of message memory, real-time controls and loudspeaker lines and amplifiers monitoring.

A complete presentation of the software could be found here.

Software manipulation and configuration procedures could be found in the "How to..." chapter.

Front panel:

The front panel is the center of stand alone operations. It offers a complete set of indicators that shows the system status, faults as well as audio activation.

It offers even more than just indicators, using the navigation buttons in combination with the color screen, DIVA8-G2T offers configuration changes and maintenance operation.

From the front panel, one will also be able of starting evacuation, alarm and a test messages with manual zone selection possibility as well as setting a music source routing.

All those features are completely compliant with the EN-54 part 16.

More information about all the front panel manipulation could be find here.

Events:

DIVA is a multi-functional device that can be use with several external sources and trigger commands. In order to associate any action to a trigger command, you will have to define Event.

One event can be compared to an action. Each action or event can be started by different means: external trigger, modulation detection, etc. Those events are hierarchically organized by priority levels set for each one of them. You also can set permanent event like playing music. More information about Events can be found in the "How To Use Events".

8. Front Panel Operations

This chapter will lead you through the different operations that could be achieved form the front panel: configuration changes, audio sources level adjustments, music sources routing and message triggering.

In order to keep things clear, this chapter will be divided in three main parts:

- Menu
- Managing Music Sources
- Messages and Microphone Call

"In Menus" chapter will explain the procedure to enter and to access different settings from the menu navigation.

"Managing Music Sources" chapter will lead you through the music routing manipulation.

"Messages and Microphone call" will focus on how to start messages and microphone call from the front panel.

Display Hierarchy:

The DIVA system display is hierarchically organized as follow, from lowest to highest priority:

1) Quiescent state: no audio is activated.
2) Normal state: non-evacuation audio is activated on the system.
3) Fault state: any fault status is detected on the system.
4) Evacuation state: a evacuation state is activated on the system.

Displays 2, 3 and 4 are active for the entire duration of corresponding state.

Note: In quiescent mode, DIVA displays the date and time.

All the LCD strings are listed and described in the LCD Messages List chapter.

Some operation from the front panel required an higher level than level 1, in that case you will have to enter a valid user name and password. Please check the user level explanation as well as How To Enter Password.

8.1. In Menus

The menu display offers the possibility to access different controls and system information. Here are the list of menu topic you will be able to access:

EVACUATION LIST:

In this menu, all evacuation occurrences will be listed from the youngest to the oldest.

FAULTS LIST:

In this menu, all fault occurrences will be listed from the youngest to the oldest.

EVENTS LIST:

In this menu, all operation occurrences will be listed from the youngest to the oldest.

FUNCTIONS MENU:

In this menu, you will be able to manage and set different configuration parameters.

Note: the

The front panel buttons are described in the hardware description -> Front View.

8.1.1. Evacuation List

In the event of an evacuation state in the DIVA system, the Evac Info List will be automatically display as a priority display. With the up and down arrow keys, you can go through the different evacuation process occurring in the system.

The youngest evacuation state/occurrence is displayed first. The evacuation status is displayed as follow:

1st line: EVAC INFO REPORT
2nd line: XXXXXXXX

Note: the XXXXXX depends on the name of the evacuation event used.

8.1.2. Faults List

In the event of a fault state in the DIVA system, the Fail Info List will be automatically displayed. With the up and down arrow keys, you can go through the different live fault occurrences in the system.

The youngest fault state/occurrence is displayed first. The fault state is displayed as follow:

1st line: FAIL INFO REPORT
2nd line: FFM KEY OPEN

8.1.3. Events List

In the event of any non-evacuation audio routing in the DIVA system, the Normal Info List will be automatically displayed. With the up and down arrow keys, you can go through the different evacuation process occurring in the system.

The youngest evacuation state/occurrence is displayed first. The normal paging/audio routing status is displayed as follow:

1st line: NORM INFO REPORT
2nd line: PLAY MUSIC 1

8.1.4. Functions Menus

The function menu allows to set and read system configuration parameters. All the following menus and setting are available from front panel:

- User Login
- User Logout
- Log Record
- Set System Time
- Stop All Events
- Read Mac Address
- Read Voltmer
- IP Settings
- Audio Levels
- SPK/AMP Monitor
- Version Display
- CRC Display
- Language Select
- LEDS/LOGIC Test

8.1.4.1. User Login

The Login menu allows to log into a user account to avoid entering it at each secured menu.

From the FUNCTIONS MENU:

- Use arrow keys to access the USER LOGIN menu.
- Press OK.
- It display the current user account Level, default is Level 1.
- Press OK.
- Enter an Username and a Password.
- It displays the current user account level.

8.1.4.2. User Logout

In case of multiuser levelling, you can logout from the current user session in order to login in an other one.

From the FUNCTIONS MENU:

- Use arrow keys to access the USER LOGOUT menu.
- Press OK, it will display "Sure? OK/ESC".
- Press OK.
    - You will be prompt to login.
    - Enter your user name.
    - Enter your password.
    - You will be log in your user account.
- Press ESC to go out of the menu.

8.1.4.3. Log Record

In the menu section of DIVA, you can read the Log File as well as clear it if needed.

To read the Log File:

From the FUNCTIONS MENU:

- Use arrow keys to access the LOG RECORD menu.
- Press OK.
- Use arrow keys to display different Log Files occurrences. Note: first occurrence displayed is the the latest log file occurrence.
    - Log File occurrence are displayed in the following way:
        - First line, occurrence number and date: "XXXX yy/mm/dd"
        - Second line, time and status (Start, end): "hh:mm:ss Status"
- Press OK.
- Log File entry is displayed in plain text on two lines.
- Press Up arrow or Down Arrow keys to go to the previous/next log file occurrence.
- Press ESC to go back to the Log Record menu.

For a complete list of Log File entry, please read the Log File Messages List chapter.

To clear the current Log File:

From the FUNCTIONS MENU:

- Use arrow keys to access the LOG RECORD menu.
- Press OK.
- Use arrow keys to access "Clear Log Files" submenu.
- If you want to delete the Log Files, Press OK.
- You will be asked for validation: "SURE? OK/ESC".
- If Yes, Press OK.
- If No, Press ESC.

8.1.4.4. Set System Time

On DIVA front panel, you can set the current location time format as well as the current date and time.

From the FUNCTIONS MENU:

- Use arrow keys to access the SET SYSTEM TIME menu.
- Press OK.
- The program displays SET YEAR.
- Use + or - keys to adjust the year value.
- Press down arrow to go to the next step (SET MONTH).
- Use + or - keys to adjust the month value.
- Press down arrow to go to the next step (SET DATE).
- Use + or - keys to adjust the date value.
- Press down arrow to go to the next step (SET HOUR).
- Use + or - keys to adjust the hour value.
- Press down arrow to go to the next step (SET MINUTE).
- Use + or - keys to adjust the minute value.
- Press down arrow to go to the next step (SET SECOND).
- Use + or - keys to adjust the second value.
- Press OK to validate your entries.
- At anytime, pressing ESC will ends the date and time setting process.

8.1.4.5. Stop All Events

From the front panel of DIVA, you are able to stop all the running events (events are discussed in How to use events).

From the FUNCTIONS MENU:

- Use arrow keys to access the STOP ALL EVENTS menu.
- Press OK.
- You will be asked for validation: "SURE? OK/ESC".
- If yes, Press OK.
    - It displays "EXECUTE SUCCESS"
- If no, press ESC.
- Press ESC to go out of the STOP ALL EVENTS menu.
- Press ESC to go out of the general menu.

8.1.4.6. Read Mac Address

In the world of computer networking, there is one common way to set an quasi-unique identifier to a network device. This is the MAC address (Media Access Control Address). This number act like a name for one particular network device. This cannot be change.

To see the MAC address just follow this steps:

From the FUNCTIONS MENU:

- Use the arrow keys to access the READ MAC ADRESS menu.
- click OK, the MAC Address number is displayed.
- Press ESC to go out of the menu.

8.1.4.7. Read Voltmeter

under construction

8.1.4.8. IP settings

From the front panel menu, you can set and read all parameters concerning the network. If not already log in, DIVA will ask you to enter a valid username and password to be able to modify Ethernet parameters.

From the FUNCTIONS MENU:

- Use the arrow keys to access the IP SETTINGS menu.
- Press OK

Reading current Ethernet settings:

- IP address:
  - Use the arrow keys to access the READ IP ADDRESS submenu.
  - Press OK, the current IP address is displayed.
  - Press ESC to go back to the IP SETTINGS menu.

- Subnet mask:
  - Use the arrow keys to access the READ SUBNET MASK submenu.
  - Press OK, the current subnet mask is displayed.
  - Press ESC to go back to the IP SETTINGS menu.

- Gateway:
  - Use the arrow keys to access the READ GATEWAY submenu.
  - Press OK, the gateway address is displayed.
  - Press ESC to go back to the IP SETTINGS menu.

- UDP Port:
  - Use the arrow keys to access the READ PORT submenu.
  - Press OK, the UDP port is displayed.
  - Press ESC to go back to the IP SETTINGS menu.

Changing Ethernet settings:

- IP address:
  - Use the arrow keys to access the SET IP ADDRESS submenu.
  - Press OK.
  - Enter the IP address value using arrow keys and +/- keys. Default address is 192.168.100.100.
  - Press OK.
  - You will be asked for validation "REBOOT VALIDATE". Note: after each change in the Ethernet settings, the DIVA system need to reboot.
  - If yes, press OK.
  - If no, press ESC.

- Subnet mask:
  - Use the arrow keys to access the SET SUBNET MASK submenu.
  - Press OK.
  - Enter the subnet mask value using arrow keys and +/- keys. Default mask is 255.255.255.000.
  - Press OK.
  - You will be asked for validation "REBOOT VALIDATE". Note: after each change in the Ethernet settings, the DIVA system need to reboot.
  - If yes, press OK.
  - If no, press ESC.

- Gateway address:
  - Use the arrow keys to access the SET GATEWAY submenu.

  - Press OK.
  - Enter the gateway address value using arrow keys and +/- keys. Default address is 192.168.100.001.
  - Press OK.
  - You will be asked for validation "REBOOT VALIDATE". Note: after each change in the Ethernet settings, the DIVA system need to reboot.
  - If yes, press OK.
  - If no, press ESC.

- UDP port:
  - Use the arrow keys to access the SET PORT submenu.
  - Press OK.
  - Enter the UDP port value using arrow keys and +/- keys. Default UDP port value is 19700.
  - Press OK.
  - You will be asked for validation "REBOOT VALIDATE". Note: after each change in the Ethernet settings, the DIVA system need to reboot.
  - If yes, press OK.
  - If no, press ESC.

8.1.4.9. Audio Levels

The AUDIO LEVELS menu offers the possibility to adjust the audio level of the following sources and output:

- Fireman microphone
- Mic/Line input
- Music 1
- Music 2
- Monitoring speaker

To set the level of a source or output, follow the next steps.

From the FUNCTIONS MENU:

- Use arrow keys to access AUDIO LEVELS menu.
- Press OK.

- Fireman microphone
  - Use arrow keys to access SET FIREMAN LV submenu.
  - Press OK
  - Adjust the firman microphone level using arrow keys and/or +/- keys.
  - Press ESC to go back to the AUDIO LEVELS menu.

- Mic/Line input
  - Use arrow keys to access SET MIC/LINE LV submenu.
  - Press OK
  - Adjust the Mic/line input level using arrow keys and/or +/- keys.
  - Press ESC to go back to the AUDIO LEVELS menu.

- Music 1
  - Use arrow keys to access SET MUSIC 1 LV submenu.
  - Press OK
  - Adjust the music 1 input level using arrow keys and/or +/- keys.
  - Press ESC to go back to the AUDIO LEVELS menu.

- Music 2
  - Use arrow keys to access SET MUSIC 2 LV submenu.

  - Press OK
  - Adjust the music 2 input level using arrow keys and/or +/- keys.
  - Press ESC to go back to the AUDIO LEVELS menu.

- Monitoring speaker
  - Use arrow keys to access SET SPEAKER LV submenu.
  - Press OK
  - Adjust the monitoring speaker output level using arrow keys and/or +/- keys.

Press ESC to go back to the AUDIO LEVELS menu.

8.1.4.10. SPK/AMP Monitor

The reset monitor menu allows user to reset the speaker line and amplifier monitoring after fixing an eventual line or amplifier problems.

From the FUNCTIONS MENU:

- Use arrow keys to access SPK/AMP MONITOR menu.
- Use the arrow keys to access the RESET MONITOR submenu.
- Press OK.
- You will be asked for validation "SURE? OK/ESC".
- If yes, press OK.
- If no, press ESC.

You can get monitoring references by accessing the Get Reference submenu. You can get references individually for each speaker zones and amplifiers.

- Use the arrow keys to access the GET REFERENCE submenu.
- Press OK.
- Using arrow keys and +/- keys, choose the zone or amplifier on which you want to take the references. Zones and amplifiers, are displayed as follow:
  - M01 ZONE-X: master's zones
  - M01 VOICE AMP: master voice amplifier
  - M01 MUSIC AMP: master music amplifier
  - S0X ZONE-X: slaves zones
  - S0X VOIC AMP: slaves voice amplifiers
  - S0X MUSIC AMP: slaves music amplifiers
- Press OK.

The new monitoring reference is now taken and stored.

8.1.4.11. Versions Display

The VERSIONS DISPLAY menu allows users to verify the firmware and FPGA version that are installed into the DIVA device.

From the FUNCTIONS MENU:

- Use arrow keys to access the VERSIONS DISPLAY menu.
- Press OK.
- Use arrow keys to access the FIRMWARE VERSION submenu.
- Press OK.
- The current firmware version is displayed.
- Press OK or ESC to go back to the PROGRAM VERSION menu.
- Use arrow keys to access the FPGA VERSION sub menu.
- Press OK.

- The current FPGA version is displayed .
- Press OK or ESC to go back to the VERSIONS DISPLAY menu.
- Press ESC to go out of the menu.

8.1.4.12. CRC Display

From the CRC DISPLAY menu, you can verify that the firmware and/or configuration stored in the DIVA aren't corrupted.

From the FUNCTIONS MENU:

- Use the arrow keys to access the CRC DISPLAY submenu.
- Press OK.
- To check the firmware CRC, choose the FIRMWARE CRC sub menu with arrow keys.
- Press OK.
- The current firmware CRC check code is displayed.
- Press ESC to go back to the CRC CHECK CODE menu.
- The current firmware CRC code is displayed.
- To check the configuration CRC, choose the CONFIG CRC sub menu with arrow keys.
- Press OK.
- The current configuration CRC check code is displayed.
- Press ESC to go back to the CRC DISPLAY menu.
- Press ESC to go out of the menu.

Note: The firmware CRC check code can be found in the software on the update window (Menu Tools -> Update). The configuration CRC check code is displayed when a store configuration is processed.

8.1.4.13. Language Select

From this menu, you can select in which language the front panel information are displayed.

From the FUNCTION MENU:

- Use the arrow keys to access the LANGUAGE SELECT menu.
- Press OK.
- To change the LCD language into English, select "ENGLISH LANGUAGE" with the arrow keys.
- Press OK.
- You will be asked for validation: "SURE OK/ESC".
- If yes, Press OK.
- If no, Press ESC.
- To change the LCD language into German, select "CHINESE LANGUAGE" with the arrow keys.
- Press OK.
- You will be asked for validation: "SURE OK/ESC".
- If yes, Press OK.
- If no, Press ESC.
- To change the LCD language into French, select "FRENCH LANGUAGE" with the arrow keys.
- Press OK.
- You will be asked for validation: "SURE OK/ESC".
- If yes, Press OK.
- If no, Press ESC.

Press ESC to go out of the LANGUAGE SELECT menu.

8.1.4.14. LEDS/LOGIC Test

DIVA system provides a LEDs test function that can be activated through the front panel menu.

From the FUNCTIONS MENU:

- Use the arrow keys to access the LEDS/LOGIC TEST menu.
- Press OK.
- Press ESC to stop the test process.
- Press ESC to go out of the LEDS/LOGIC TEST menu.

Note: if an output contact is configured, you can activate LED Testing on DPA amplifiers and BECS battery charger. For more information, please read DPA series and BECS series manuals.

8.2. Managing Music Sources

On DIVA front panel, you have the possibility to assigned music sources to a zone (or multiple), set up attenuation for each speaker zone (only on music). To manage music source, the music sources should be set in "Route Key" mode, see How To Use Music Source.

The procedure to assign a music source to a zone is the following:

- Select the music source:
  - Press the SELECT button to go from Source 1 to Source 2.
  - Press SELECT button to go from Source 2 to no selection.
  - Press SELECT button to re-select Source 1.
- Select the zone(s):
  - Press the zone button(s) you want to activate on Master and/or Slaves. The corresponding white selection LED(s) should light(s) up.
- Validate the routing by pressing the ROUTE button.

Zone attenuators:

In each master zone, the music level can be attenuated depending your needs. The attenuators offer 6 attenuation positions: 0, -4, -8, -12, -16, -20 dB.

- Adjust the corresponding zone(s) ATTENUATOR KNOBS to the desired attenuation level.

Note: zones that are monitored cannot be attenuated to -20dB without causing monitoring problems. At -20dB attenuation, the accuracy of the impedance circuitry reach its limit.

Note: if two music sources are used, keep in mind that attenuator will only have effect on only one of them (music 1). Because the Voice amplifier will be used for music 2, the attenuators won't have any effect on the sound level.

Note: Music attenuator are only available on Master DIVA unit

8.3. Messages and Microphone Calls

From the front panel, you have the choice two start three different messages or do a zone call with the fireman microphone. Read the following two chapters for more information about how to set up messages and how to configure the Fireman Microphone.

There are three front panel message buttons plus one reset button:

- EVAC: initiates a evacuation message broadcasting process.
- ALERT: initiates a evacuation message broadcasting process.
- MSG TEST: initiates a evacuation message broadcasting process.

RESET: initiate a software reset process.

8.3.1.1. Messages

Depending on the software configuration created, there is two distinct way of starting a message: with manual zone selection or with pre-defined zone. To learn more about how to set pre-defined zone on message, please read the

"How to set up front panel messages" chapter.

Starting message with Pre-define zone(s):

- From EVAC button
  - Lift the EVAC button cover.
  - Press the EVAC button.
  - DIVA displays "EVAC KEY PROCESS".
  - Press OK.
  - DIVA displays "EVAC CONFIRM 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "EVAC CONFIRM 2 SURE? OK/ESC".
  - Press OK.
  - The message is played in the pre-defined zone(s).

- From ALERT button
  - Press the ALERT button.
  - DIVA displays "ALERT KEY PROCESS".
  - Press OK.
  - DIVA displays "ALERT COMFIRM 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "ALERT CONFIRM 2 SURE? OK/ESC".
  - Press OK.
  - The message is played in the pre-defined zone(s).

- From MSG TEST button
  - Press the MSG TEST button.
  - DIVA displays "TEST KEY PROCESS".
  - Press OK.
  - DIVA displays "TEST CONFIRM 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "TEST CONFIRM SURE? OK/ESC".
  - Press OK.
  - The message is played in the pre-defined zone(s).

Starting message with a manual zone(s) selection:

- Press the zone button(s) where you want the message to be played. The corresponding white selection LED(s) should light(s) up.
- From EVAC button
  - Lift the EVAC button cover.
  - Press the EVAC button.
  - DIVA displays "EVAC KEY PROCESS".
  - Press OK.
  - DIVA displays "EVAC ENABLE 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "EVAC ENABLE 2 SURE? OK/ESC".
  - Press OK.
  - The message is played in the manually selected zone(s).

- Press the zone button(s) where you want the message to be played. The corresponding white selection LED(s) should light(s) up.
- From ALERT button
  - Press the ALERT button.

  - DIVA displays "ALERT KEY PROCESS".
  - Press OK.
  - DIVA displays "ALERT ENABLE 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "ALERT ENABLE 2 SURE? OK/ESC".
  - Press OK.
  - The message is played in the pre-defined zone(s).

- Press the zone button(s) where you want the message to be played. The corresponding white selection LED(s) should light(s) up.
- From MSG TEST button
  - Press the MSG TEST button.
  - DIVA displays "TEST KEY PROCESS".
  - Press OK.
  - DIVA displays "TEST ENABLE 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "TEST ENABLE 2 SURE? OK/ESC".
  - Press OK.
  - The message is played in the pre-defined zone(s).

Stopping message broadcasting:

- Reset the evacuation process.
  - Press the RESET button.
  - DIVA displays "RESET KEY PROCESS".
  - Press OK.
  - DIVA displays "RESET ENABLE 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "RESET ENABLE 2 SURE? OK/ESC".
  - Press OK.
  - A software reset is applied. Any active trigger (fault, contact, etc) are restarted after the software reset.

- Stop ALERT or MSG TEST broadcasting.
  - Press the ALERT or MSG TEST button.
  - DIVA displays "ALERT or MSG TEST KEY PROCESS".
  - Press OK.
  - DIVA displays "ALERT or MSG TEST DISABLE 1 SURE? OK/ESC".
  - Press OK.
  - DIVA displays "ALERT or MSG TEST DISABLE 2 SURE? OK/ESC".
  - Press OK.
  - The message broadcasting is stopped.

8.3.1.2. Fireman Microphone

Depending on the software configuration created, there is two distinct way of starting a Fireman microphone call: with a manual zone selection or with pre-define zone(s) selection. To learn more on how to configure pre-define zone selection fro the fireman microphone, please read the "how to use a fireman microphone" chapter.

Starting a call with pre-define zone(s):

- Press the fireman microphone contact to start speaking in the pre-defined zone(s), the corresponding zone EVAC LED(s) are lit.

Starting a call with manual zone(s) selection:

- Press the zone button(s) where you want the call to be played. The corresponding white selection LED(s) are lit.
- Press the fireman microphone contact to start speaking in the selected zone(s), the corresponding zone EVAC LED(s) are lit.

Stopping a fireman microphone call:

- Release the fireman microphone contact if used in "push to talk" mode.
- Press the fireman microphone contact a second time if used in "Lock to talk" mode.

Note: if the fireman microphone is using a pre and/or post chime message, the "RUNNING" LED will blink during the chime broadcasting.

9. How To?

The How To section is divided by theme. Each Theme discusses about how to perform an action or multiple action in order to build a configuration.

The Philosophy of this chapter is that if you read it from A to Z, you will be able to perform a full advanced DIVA configuration. But it has been written to offer quick navigation so that you can find specific information about one theme. Here under, you will find a complete list of the How To topics:

- **Set Computer Network parameters**
- **Configure network Options**
- **Search Device**
- **Set IP Address**
- **Save/Open**
- **Change Colour Scheme**
- **Print Project**
- **Start a New Project**
- **Set up System Options**
- **Use the User Management**
- **Enter Password**
- **Verify DIVA versions**
- **Update**
- **Compile**
- **Store**
- **Reverse**
- **Add design Component**
- **Perform a DIVA Master Network**
- **Add DIVA8S Slave**
- **To Set Speaker Parameters Settings**
- **Add Messages Into DIVA**
- **Use Events**
- **Set up Front Panel Messages**
- **Use a Fireman Microphone**
- **Use Music Source**
- **Use PSSG2 Microphone**
- **Use PSSG2-E Microphone**
- **Use PSM8 Microphone**
- **Use CD16 Microphone**
- **Use Mic/Line Input**
- **Use Logic Inputs**
- **Use Output Relay**
- **Do Phase evacuation (Evac Configuration)**
- **Use Monitoring**
- **Use the Scheduler**
- **Use filters**
- **Use PEQs**
- **Use Compressor/Limiter**
- **Use Presets**
- **Create a Monitorable Button**
- **Use Tone Generator**

- **Use RS232 Ports**
- **Put DIVA in Vox@net**
- **Page Into Vox@net**
- **Configure Remote Access**
- **Wire Devices**
- **Manage Log File**

Note: Some topics could be divided in sub-topics as the procedure could induce multiple procedure to achieve the main goal.

9.1. Set Computer Network Parameters

Before attempting to connect to a DIVA through TCP/IP, make sure that your computer Ethernet settings are corresponding to the one in DIVA. You have two possiblities to make them compatible, either change manually change the DIVA Ethernet settings or adapt your computer Ethernet settings.

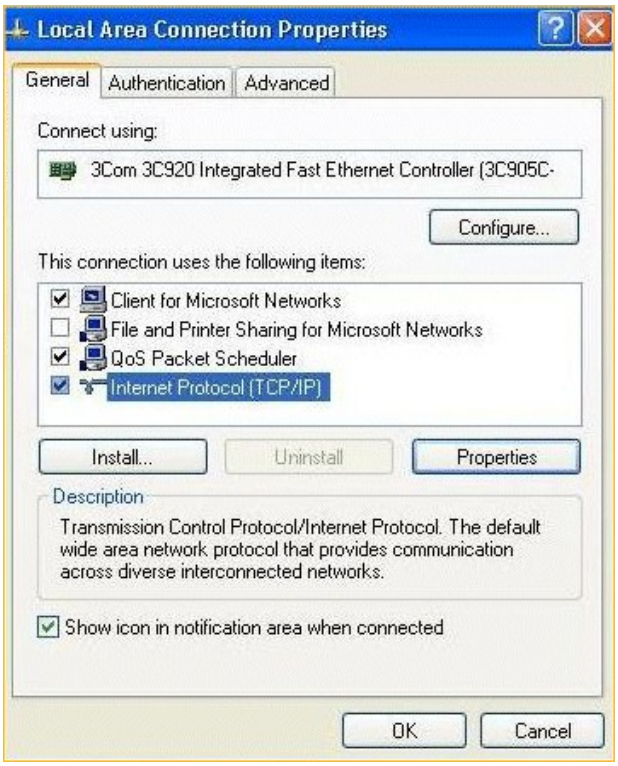
DIVA's default ethernet settings:

IP address: 192.168.100.100
Subnet Mask: 255.255.255.0
Gateway: 192.168.100.1

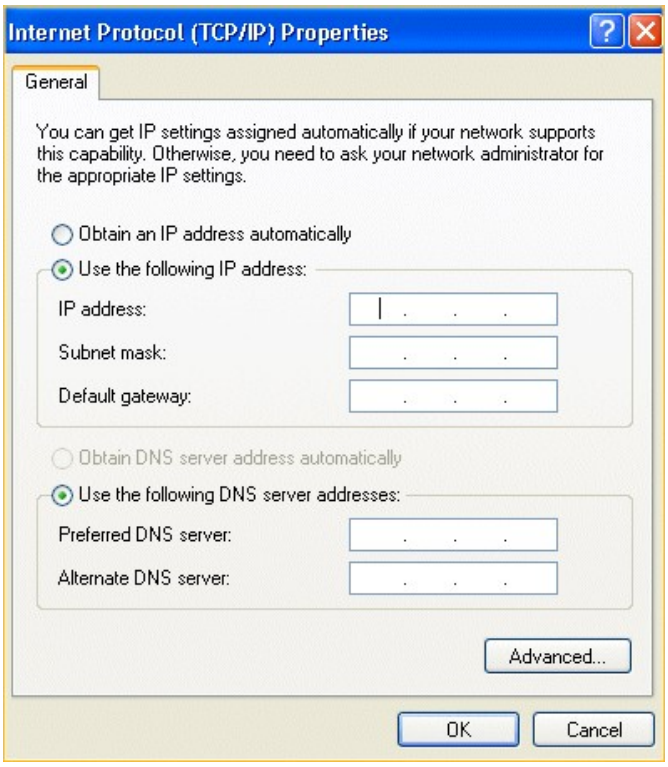
To check and/or modify your computer network settings, follow the next steps:

this step by step procedure is only accurate for Windows XP.

- From Start, go to Settings, then Control Panel.
- From the Control Panel, double click Network Connections icon.
- If you have created a Local Area Connection and want to modify it, right click the icon, highlight Properties.
  Note: choose the Network connection/card you'll use.



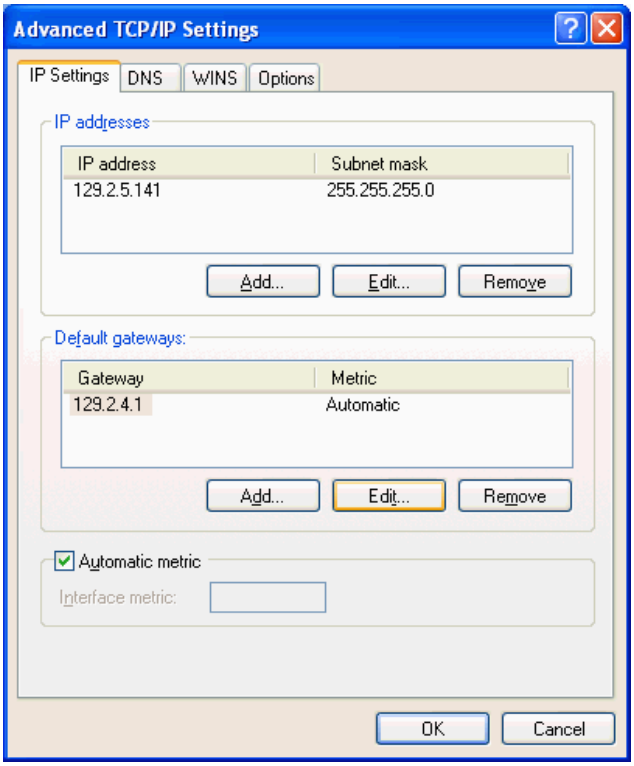
- Highlight Internet Protocol (TCP/IP) and then click on properties. It will display the following Internet Protocol (TCP/IP) Properties dialog box:


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

- Select "Use the following IP Address" and enter values for IP address, Subnet Mask, Gateway. If you are not sure what settings you should apply, please ask your network administrator.
- Select "Obtain DNS server address automatically", this would work most of the time.

In windows for one network connection/card, you can specify several IP addresses.

- In the Internet Protocol (TCP/IP) Properties dialog box, click on "advanced".



- Under IP address, click the Add button.

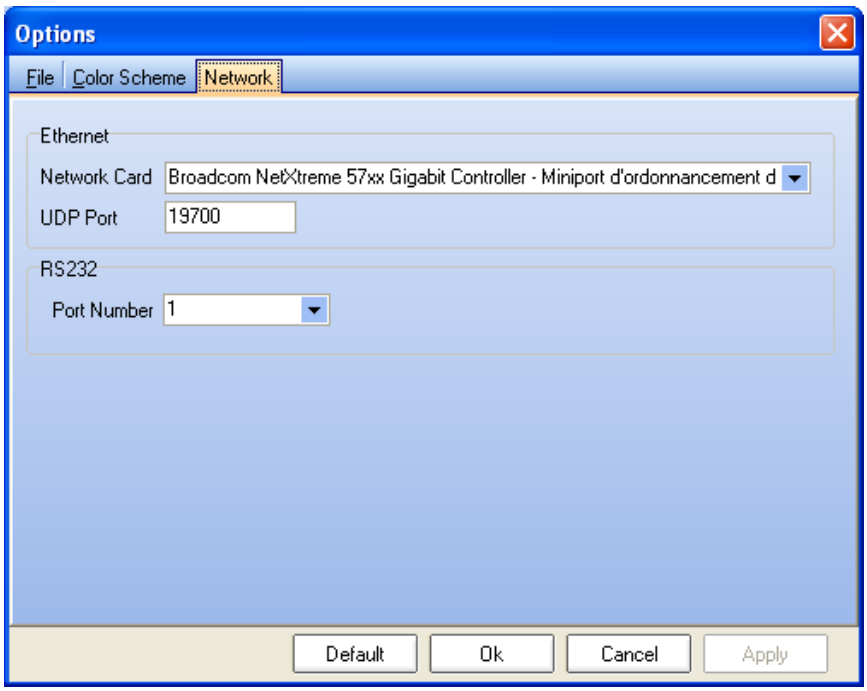
- Enter the additional IP address and Subnet Mask.

For more information about IP addressing, you can read the following article: IP addressing on Wikipedia.

9.2. Configure Network Options

In order to be able to communicate with DIVA master units, you have to set your network parameters.

In the Network options page, you can specify your network card, the UDP port value as well as the RS232 port number.

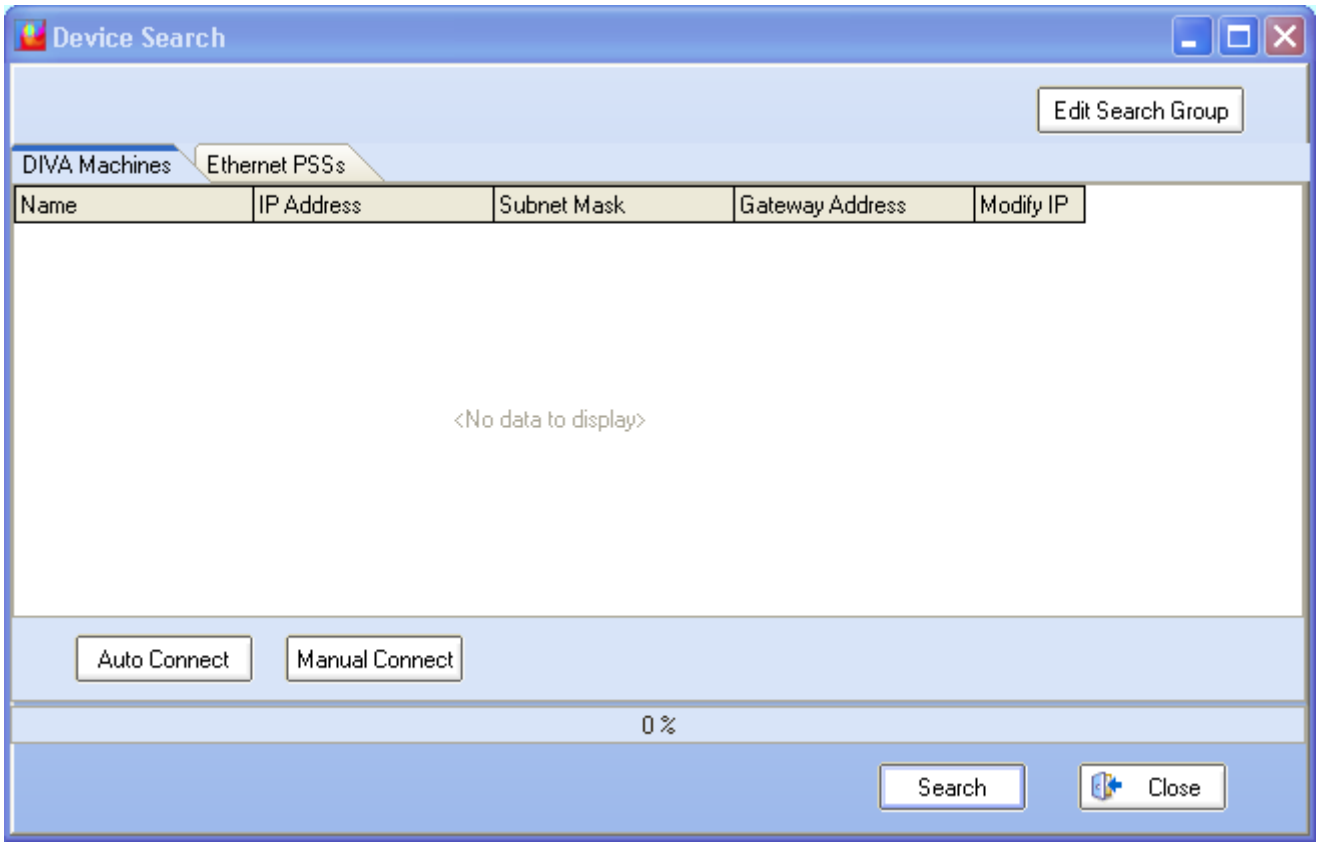


After all the network options have been set, please refer to the How To Set IP Address paragraph.

Note: changing the UDP port value should be done only with extreme care. Wrong settings could make the system unavailable on the network. It is highly recommended to use the default UDP port setting.

9.3. Search Device

To perform a device search, go to the menu Tools -> Device Search. The Device search window will open, see below.

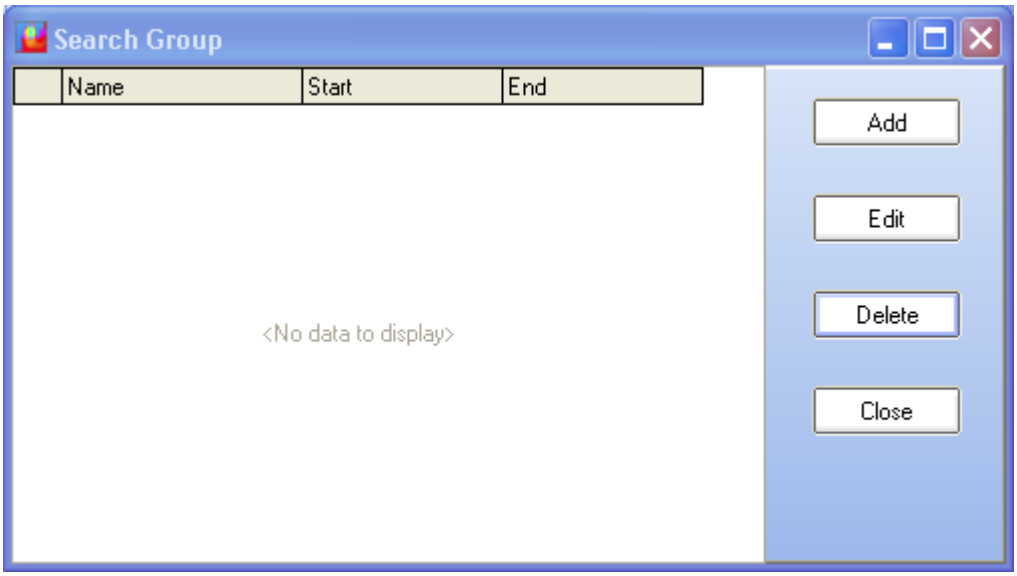


Buttons explanation:

- **Edit Search Group:** allows to define IP addresses group in which to perform the search process
- **TABs:** you have access to two different search tabs, on to search for master DIVA unit and one to search for Ethernet PSS devices.
- **Search:** starts the search process. A progression bar indicates when the search is finished
- **Auto Connect:** allows the connection to a master DIVA that have been found. Select a master in the list by just clicking on the corresponding line. Note: attention do not select Enable DHCP when clicking on the line, it could cause connection problem.
- **Manual Connect:** allows to quickly connect to a known master DIVA IP without doing the search process
- **Close:** closes the Device Search window

Before starting to search for devices connected to an IP network, search group have to be defined. Please follow the next few steps:

- Click on the Edit Search Group button, the search group window appears



- Click on the Add button, the Edit Search Group window appears

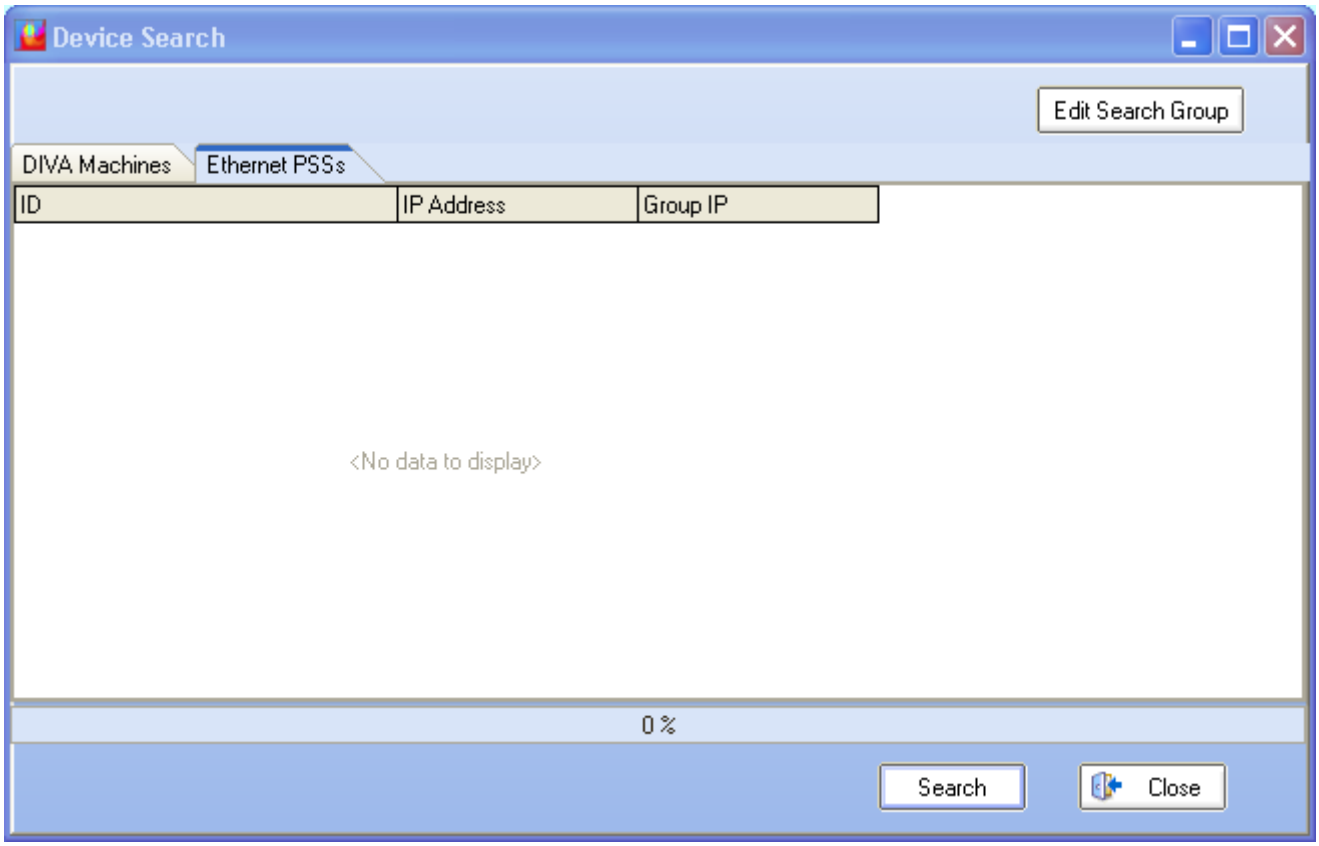
- Enter a name for the group
- Enter an IP addresses range, enter the start address and the end address
- Click OK

In the Search Group window, you can manage groups by deleting them or edit them. To delete or edit one group, tick the corresponding check box and click on either the Delete button or the Edit button.

- Click on the Search button to start the search process.
- Click on the corresponding device line.
- Click on the Auto Connect button. A window pop up indicates the connection status.

You can also manually enter the DIVA IP address by click on the Manual Connect button. This avoids using the search process if the IP address of the device is known.

To search the network for Ethernet PSS devices, go on the Ethernet PSS tab.



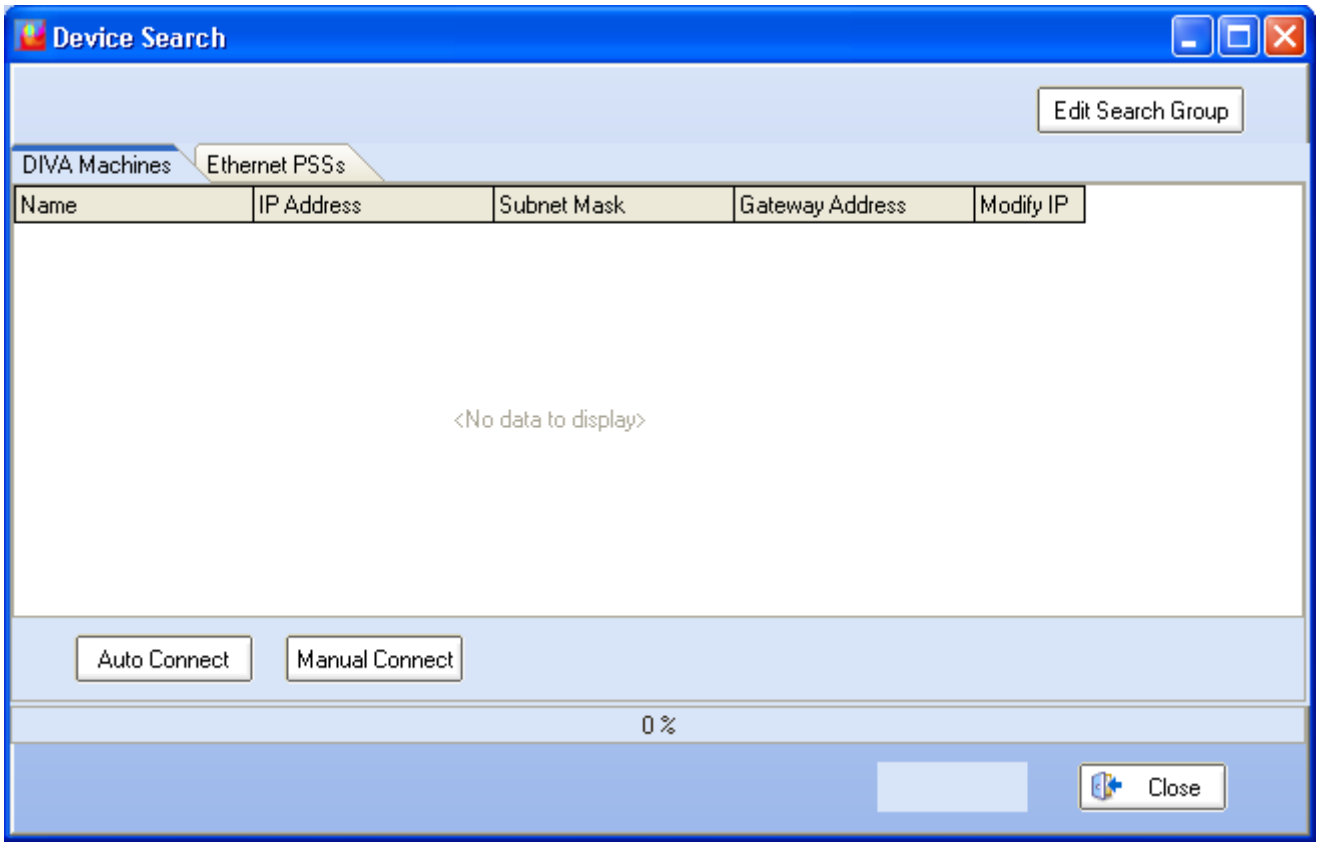
Once an Ethernet PSS will be found, you will be able to use it in the configuration, see How to Use Ethernet PSS.

9.4. Set Ip Address

From the front panel of DIVA, you can change the address from the LCD menu display. In order to do this, please read this.

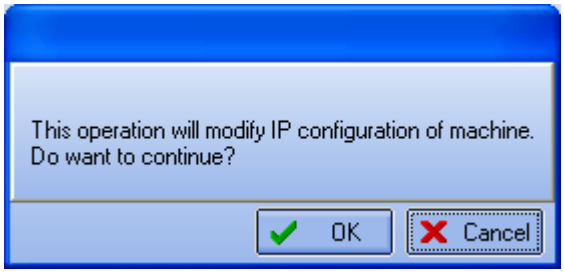
DIVA's default IP address is 192.168.100.100

IP, Submask and gateway address can also been changed from the software by going in the device search menu: Tools -> Device Search. **Note:** you should be connected to the DIVA unit to be able to operate Ethernet setting changes.

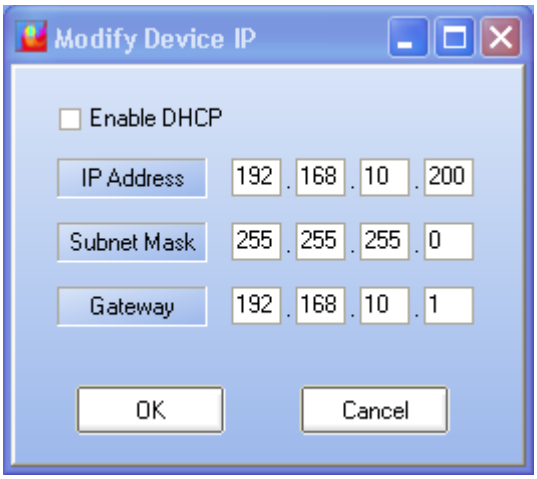


To modify the IP settings of the device, please follow the next steps:

- Click on the corresponding device Modify button
- It prompts you either if you want to continue or to cancel the modifying IP process



- Click OK, the Modify Device IP window appears



- In this window you can enable DHCP by ticking the corresponding check box
- Enter the IP address value
- Enter the Subnet Mask value
- Enter the Gateway value
- Click OK
- If not already logged in, it will prompt you to enter an username and password
- System will reboot automatically

Note: you have to keep in mind that setting TCP/IP parameters not related to the one set for your network card, could lead to communication problems.

9.5. Save/Open

The Save/Open procedure is quite identical to most of the Microsoft Windows based software. The icon used as well as keyboard shortcuts are well-known for Microsoft Windows users.

Here you will find procedures to:

- Open a file
- Save a file
- Save a file as
- Set an Autosave process

9.5.1.1. Open

Open a DIVA file:

Click on the Open Icon (Highlighted in picture below) in the Edit toolbar or go to menu File -> Open or even press ctr+o.

9.5.1.2. Save

Save a DIVA file:

Click on the Save Icon (Highlighted in picture below) in the Edit toolbar or go to menu File -> Save or even press ctr+s.

The first time you will be saving a project, you will be prompt to enter a name for that file. The 'Save' command is used to save current project under the current name.

Note: DIVA's configuration files are saved in .diva extension.

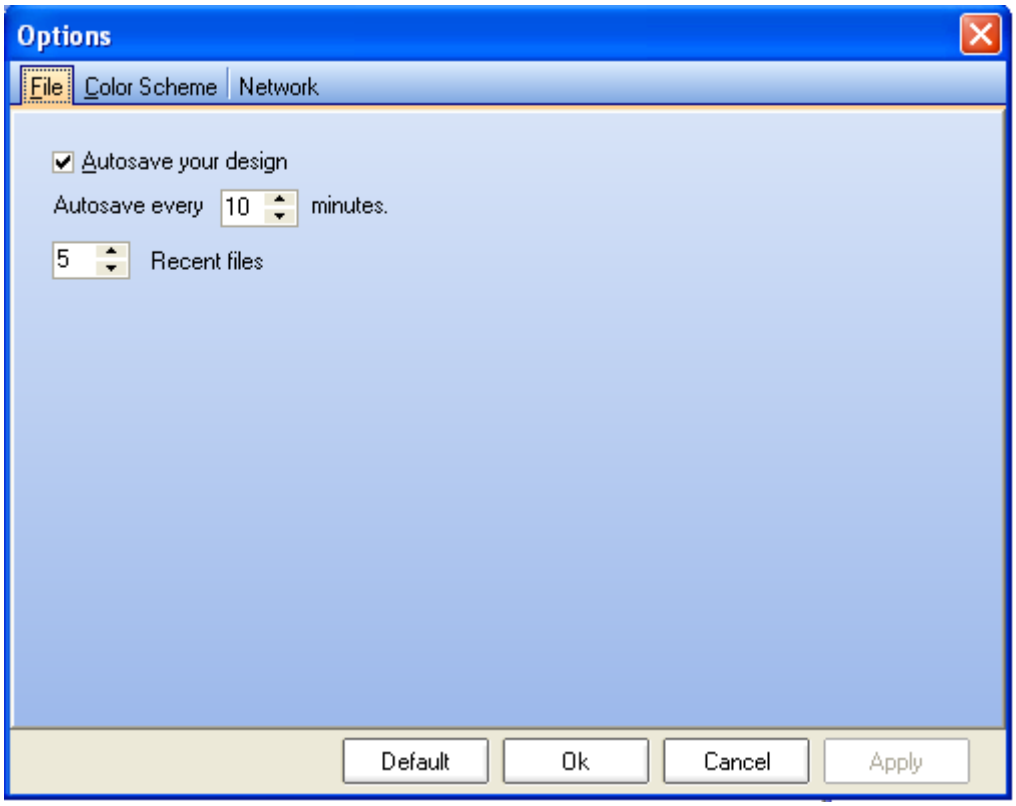
9.5.1.3. Save As

The 'Save As' option can be used to save a configuration under a different name.

Simply go to the menu File -> Save As

9.5.1.4. Autosave

In the Options page under File tab, you have the possibility to set an autosave procedure. You also can set the number of recent files visible in the file menu -> recent files.



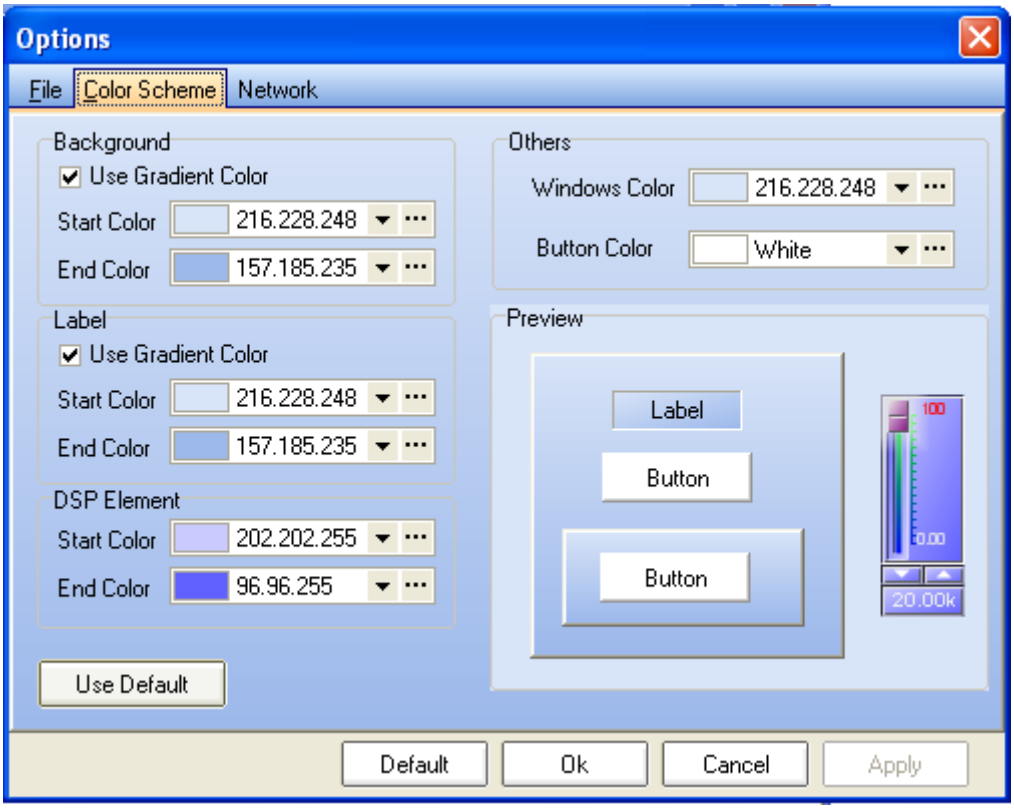
- Tick the "Autosave your design" option in order to activate the autosave option
- Choose after how much time the "autosave" will automatically run.
- Choose how many recent files would be visible in the menu file -> recent

9.6. Change Color Scheme

In the Color Scheme Options page, you will be able to personalize the colour scheme of DIVA software. You can change colour for:

- Background
- Label
- DSP element
- Other (Windows and Buttons)

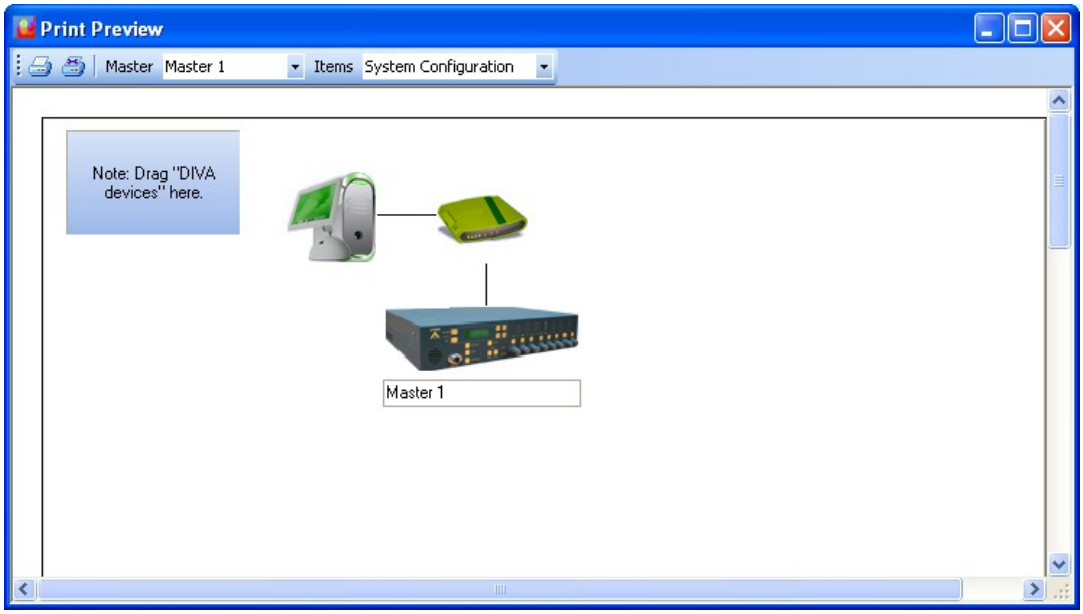
By using the "Use Default" button, you can retrieve default color scheme.



9.7. Print Project

In order to print a project, you need to access the print preview page. To access this page, go in the menu: File -> Print or click on the print shortcut (highlighted on picture below) in the edit toolbar.

Once you launch the print command, you will enter the "Print Preview" window, see below. The print preview offer you the possibility to print DIVA main windows separately. In case of DIVA master Network, you can select which master window you want to print.



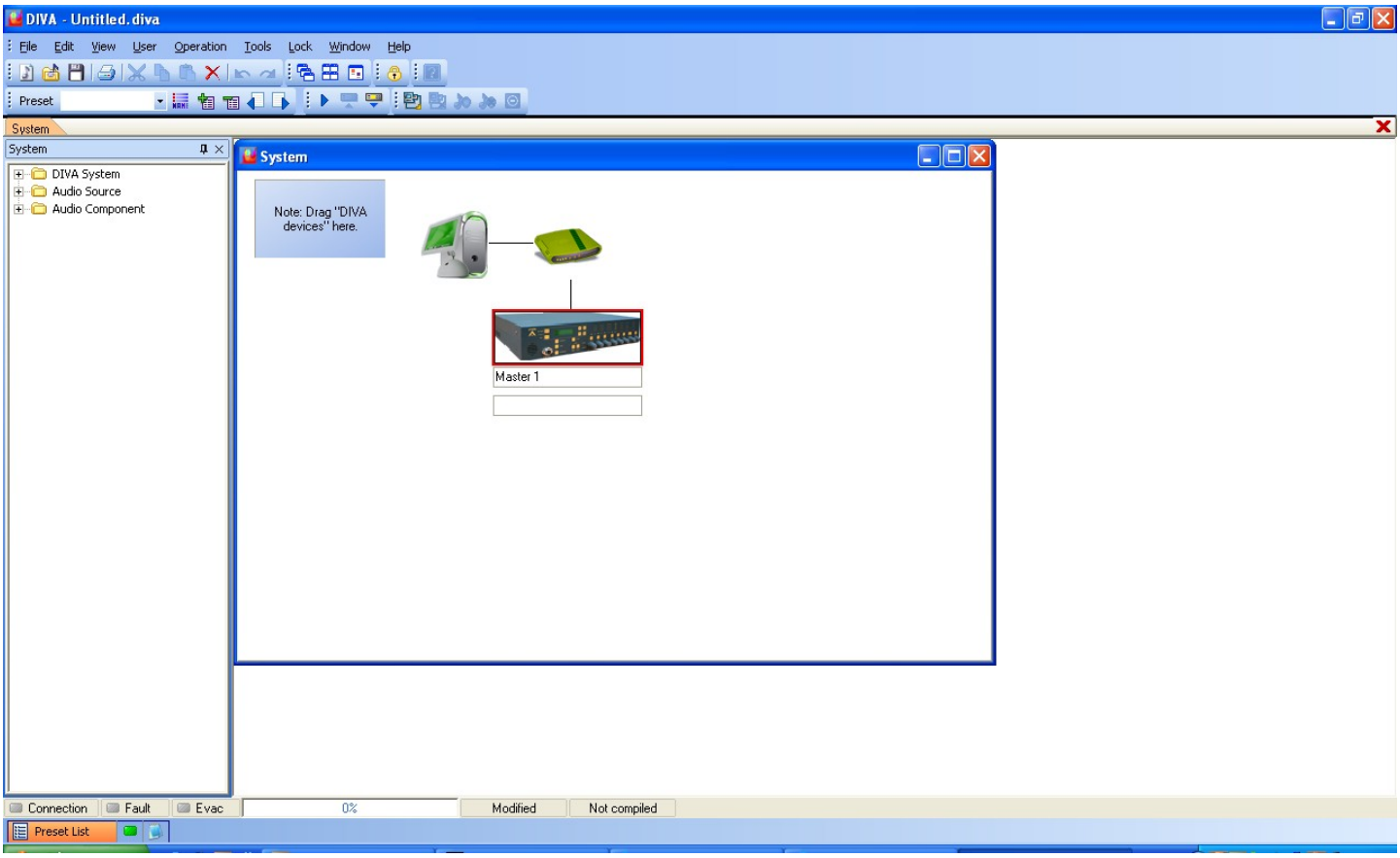
The print toolbar include:

- **Print Button:** in order to send the print request
- **Print Setting Button:** in order to set your printer parameters
- **Master Drop-Down Menu:** here you can change the DIVA master unit
- **Items Drop-Down Menu:** Here you can select which window have to be print, choose between 'System configuration', 'Master Configuration' and 'DSP Configuration'

9.8. Start a New Project

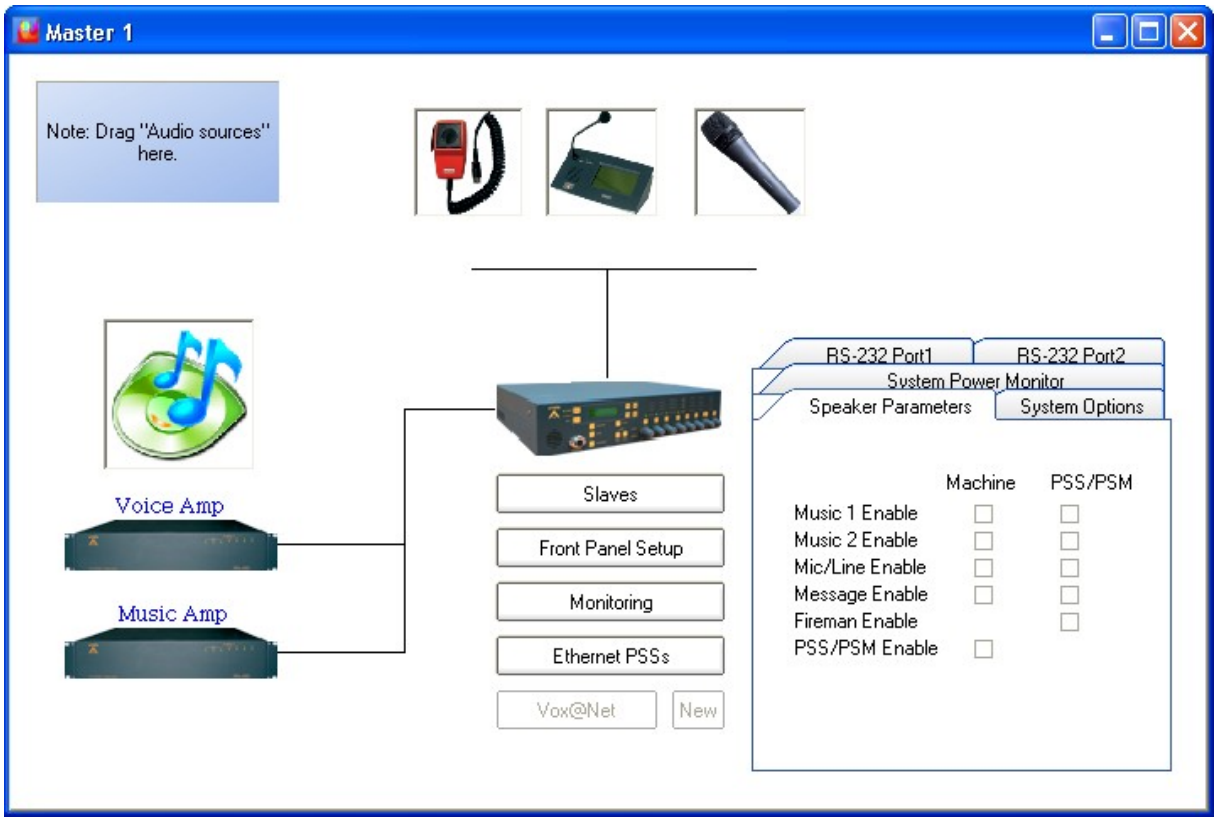
In order to start a new project, go to the menu: File -> New, or click on the 'New' shortcut on the edit toolbar (see below) or even type ctrl+n.

After launching a new project, the DIVA software start a new system window looking like the one on the picture below.



Once the new project is launched, you will need to set up the network options as well as the correct IP address, see How To Configure Network Option and How To Set IP Address.

By double-clicking the DIVA icon, you will enter the master window page, see below.

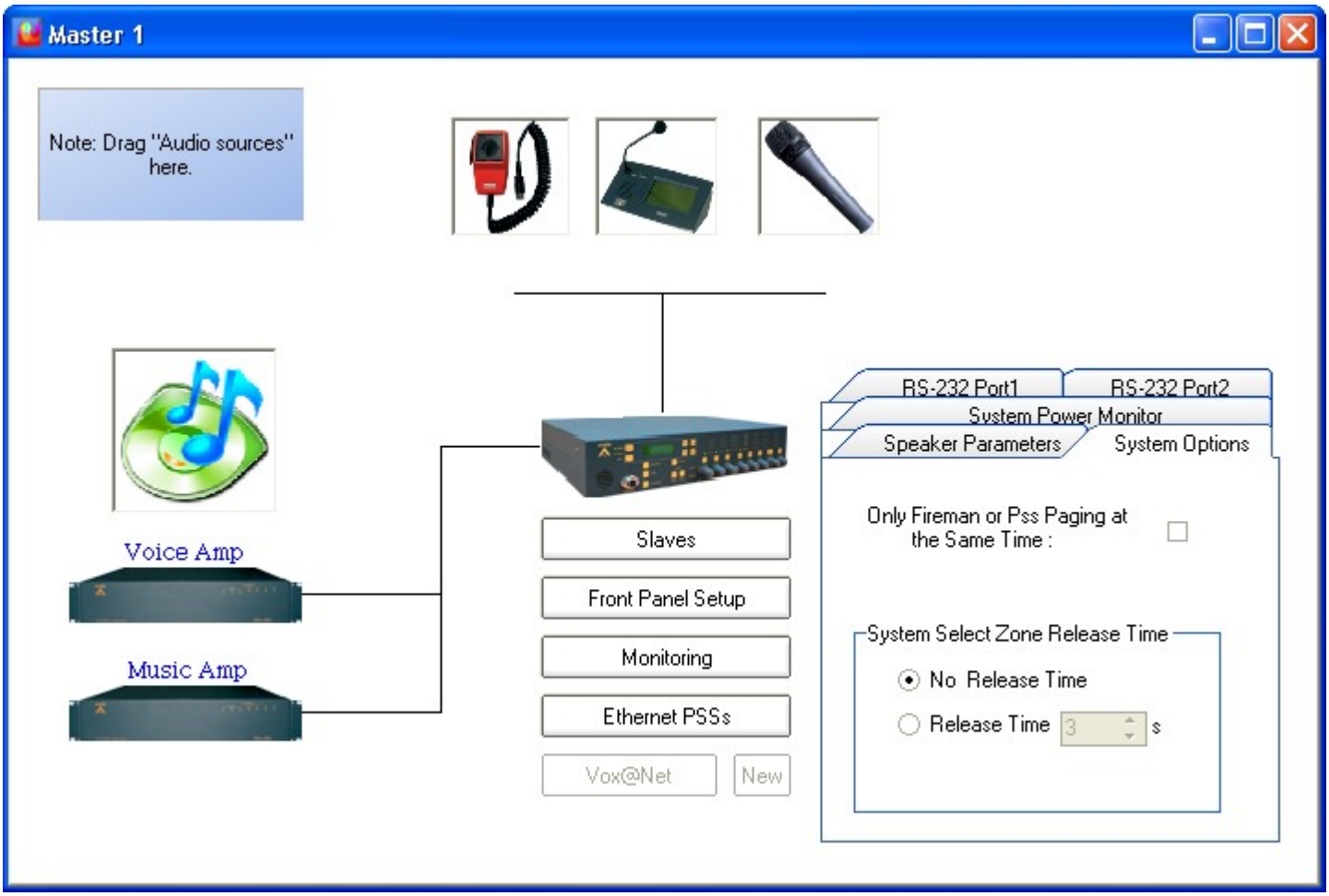


In the Master window you will be able to:

- add design components
- set speakers parameters for DIVA and PSS
- Set system options
- Set system power monitor
- Access to the slave unit configuration
- Access the front panel configuration window
- Access the monitoring window
- Access to the Ethernet PSS configuration Window
- Access to the Vox@Net paging configuration
- Set RS232 Port 1 and 2 communication parameters.

9.9. Set up System Options

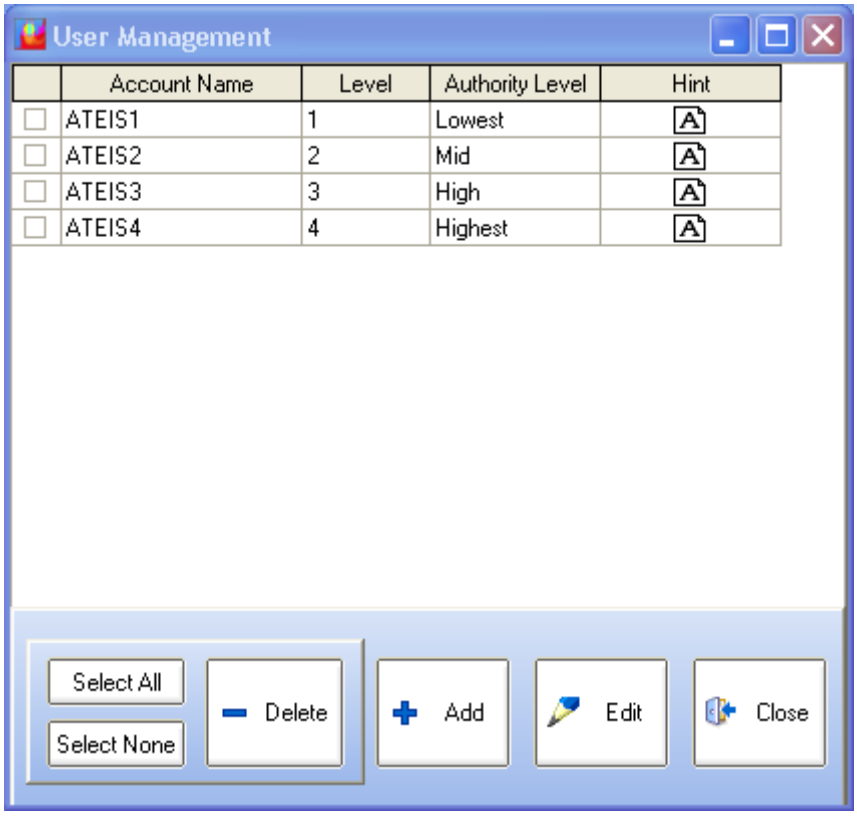
The DIVA application software offers general system options. Once a new project is created, you will find those options on the "Master 1" configuration window under "System Options" tab.



- **Only Fireman or PSS paging at the same time:** if ticked, this option will only allowed on paging microphone at a time, either the fireman microphone or PSS microphone. To avoid conflict, verify both microphone priority before enabling this option.
- **System Select Zone Release Time:** Once a manual zone selection is made on the front panel, the selection could be held in memory for a certain amount of time. If the selection should remain active unless manual deactivation, enable the "No Release Time" option. If you want to enable a time out on the zone selection, which means that the manual selection will be disabled, enable the "Release Time" option and set the desired time out value.

9.10. Use the User management

To access the user management window, go on the menu User -> User Management.



The picture above shows the main page of the user manager. In this page you will be able to add new user account, delete account and modify account settings. The List below describes the different displays:

- **Account Name:** displays the account name.
- **Level:** displays the corresponding user account level.
- **Authority Level:** displays in the user account authorization level.
- **Hint:** by clicking on the Hint button on user account, it will display in plain text the right and restriction for the account.

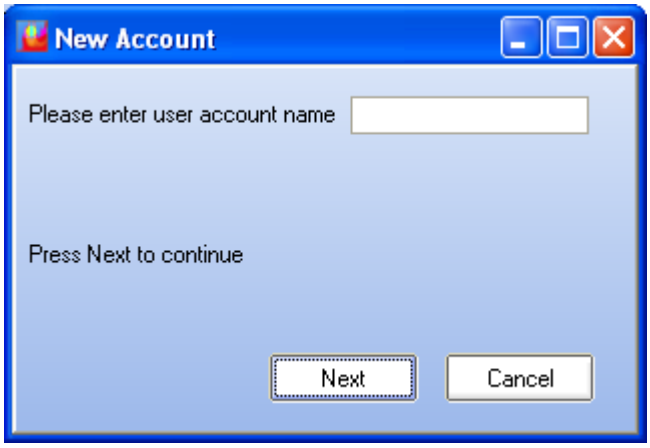
The list below explains how the button works:

- **Add:** allows to add new user account
- **Edit:** allows to edit existing account parameters
- **Select All:** can instantaneously select all the existing account
- **Select none:** instantaneously unselect the previously selected account
- **Delete:** allows to delete accounts
- **Close:** closes the User Management window

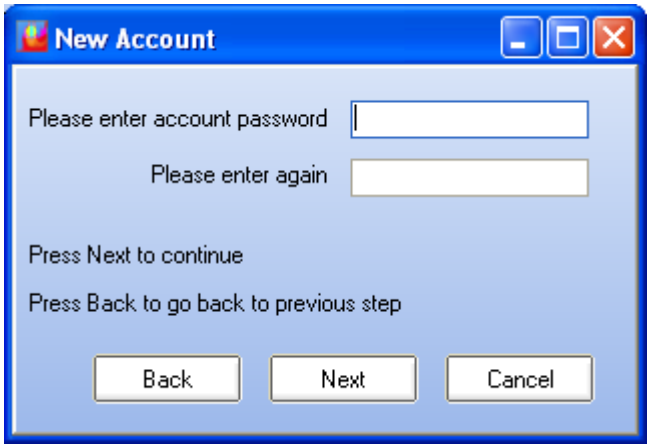
Note: by default, four user accounts are created corresponding to the four user level existing in DIVA application

9.10.1. Add User Account

To add a new user account, simply click on the add button. A New Account pop-up window like the one below will appear.



- Enter the user name for the new account
- Click next

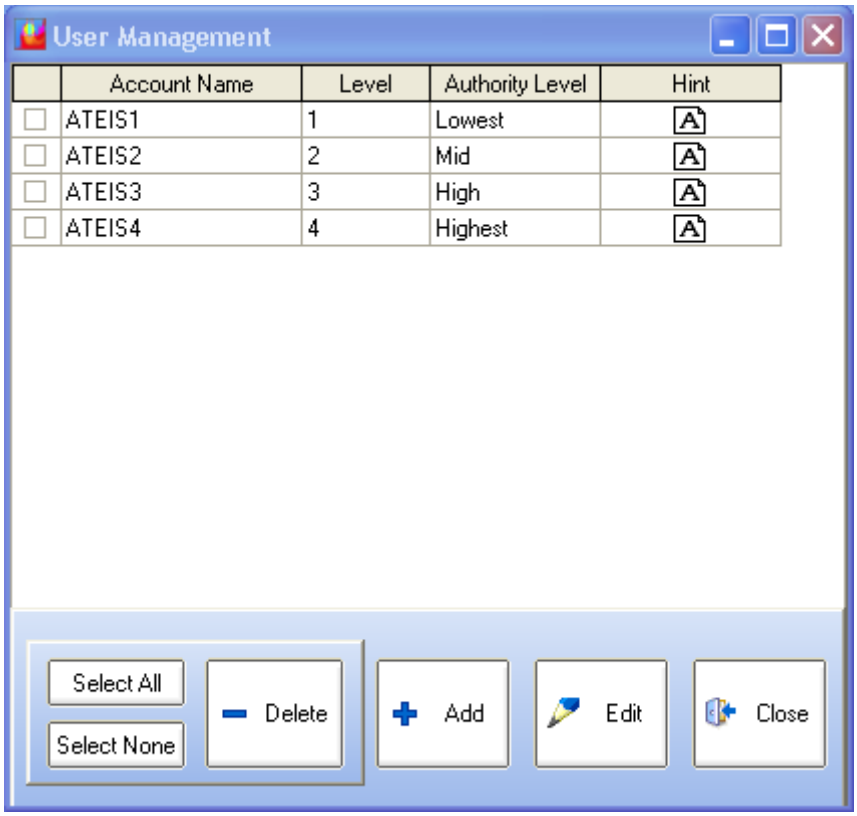


- Enter a password for the account created
- Confirm password
- Click Next to continue the process of creating an account
- Click Back to go back to the previous step

- Select an Level for this user account, explanation on user level can be found here.

- Click Finish to finish the process
- Click Back to go back to the previous step

9.10.2. Delete User account



- Select an account in the list of the User Management by ticking the corresponding check box
- Click on delete
- it will prompt you "Delete User account?", click OK to delete or Cancel to stop the delete process

9.10.3. Explanation on User Level

In order to comply to the European standard EN 54-16, the user level have been set as described:

- **Level 1** is the lowest level.

  Level 1 has the right to use real-time software control (music level, filters and PEQ), real-time front panel control (music level, speaker level) and indicators.

  Level 1 is always accessible without password.

  Can do reverse procedure and connect from software.

- **Level 2** is defined to be for person having a specific responsibility for safety.

  Level 2 has all right, except:
  - Storing config + messages
  - Change Ethernet settings

  To enter level 2, a password is needed.

- **Level 3** is for specific maintenance operator and trained persons. Level 3 has all the right of level 2.

- Store a new configuration file
- Manage messages
- Maintenance operation

To enter level 3, a password is needed.

- **Level 4** is for authorized by the manufacturer to either repair the unit and/or alter its firmware. Level 4 has all the level 3 rights.

  - Update firmware
  - Repair

  To enter level 4, a password is needed.

9.11. Enter Password

For process like storing and updating, you will need a username and a password, see How To Use User Management.

There are two different way of connecting to your account, from front panel or from software.

- From front panel:

  When trying to attempt protected operations, you will have to enter you user name and your password.

  - Use the arrow keys to select the right letter or number
  - click OK
  - enter the next letter or number repeating the same procedure
  - Once you have enter the right user name, press once the down arrow key to find "APL". Press OK, this will validate you entry
  - DIVA will ask to enter your password, repeat the same procedure to enter password

- From software:

  You will be automatically login after first store, update, network options change, ethernet settings change. Effectively, DIVA software will ask you to enter a valid user name and password and will remember your username and password until you exit or logout of the current configuration file.

  To log out, go to the menu User -> Logout.

Default User Name and Password are:

- ATEIS4 and ATEIS4 (highest level)
- ATEIS3 and ATEIS3
- ATEIS2 and ATEIS2
- ATEIS1 and ATEIS1 (lowest level)

Note 1: username and password entry are not case sensitive, they are always filled in capital letters.
Note 2: in order to have to highest level control, please use the ATEIS4 default account.
Note 3: configuration won't be stored if no level 4 account exist.

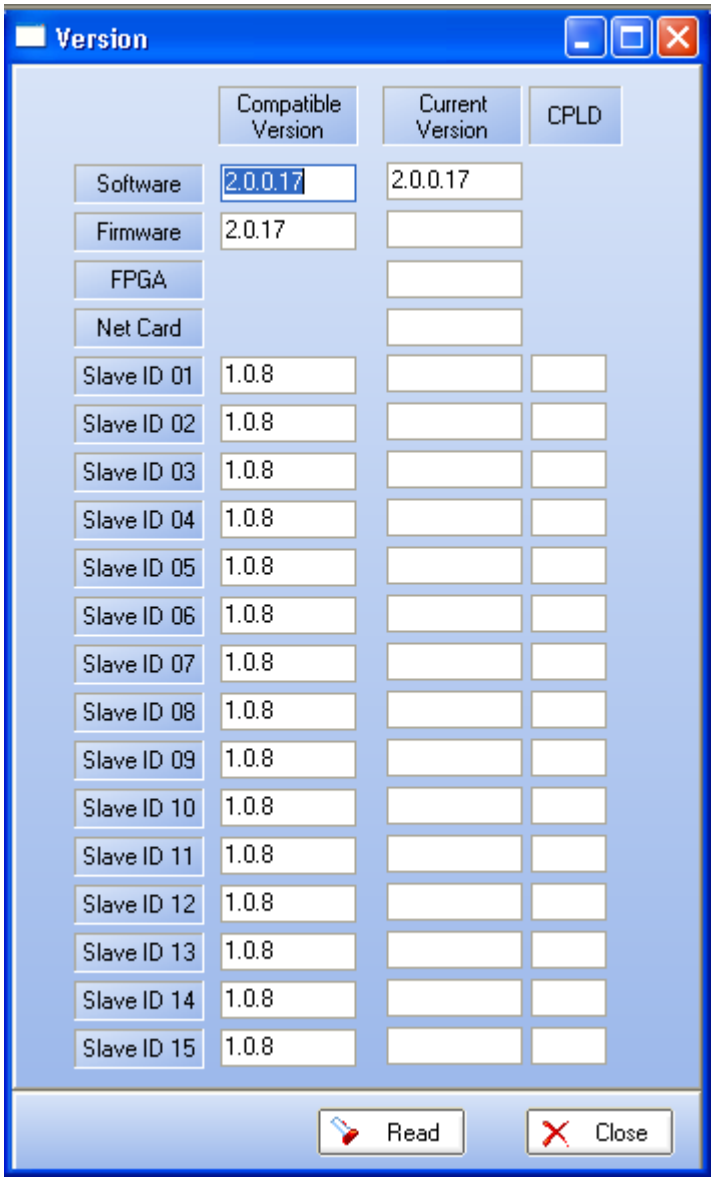
9.12. Verify Diva Versions

Before checking the DIVAs firmware versions, you should connect to the machine trough TCP/IP, see How to Search Device chapter.

In order to verify that the current software correspond to the DIVAs' units firmware, please follow the next steps:

- Go in the menu "Help"
- choose "Version"

Then the following window should pop up:



- Click the "Read" button

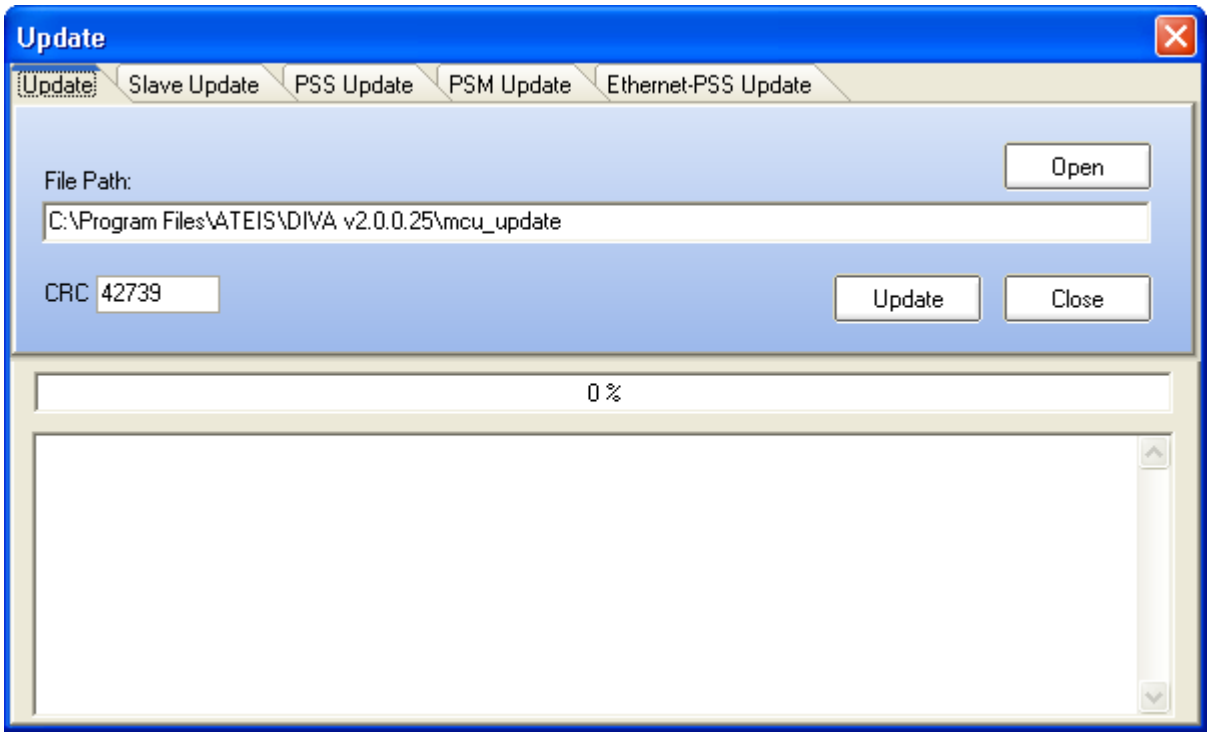
The "Compatible Version" displays shows the firmware version that will be working with the application software version currently installed. "Current Version" displays shows the current DIVA units firmware version.

If one unit is in a uncompatible version, the version number will be red highlighted. In that case, an update has to be done.

9.13. Update

The update command allow user to upgrade the DIVA internal software to the version delivered with the Windows based software. This is one of the first things to do when starting a new project or using a DIVA unit for the first time. This could really save time and avoid communication and store problem.

To activate this command, go the menu: Tools -> Update. The Update window will pop up:

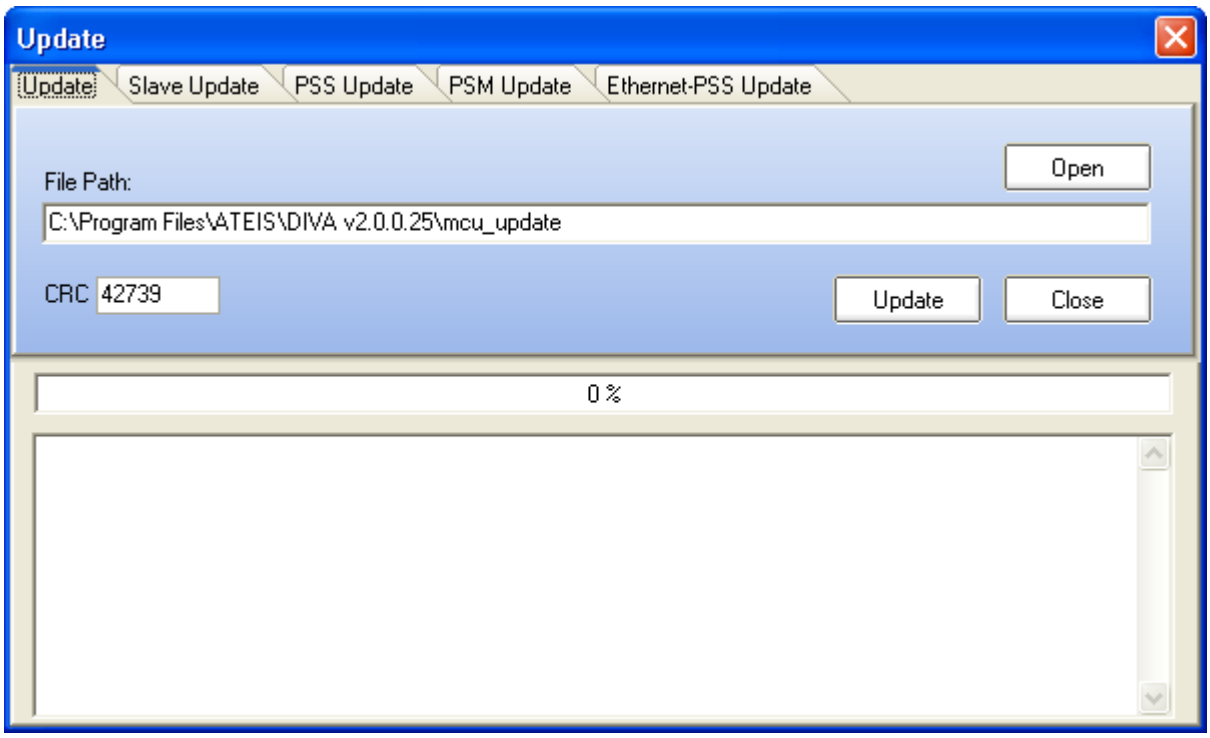


On this window, you will find 4 different tab which correspond to 4 different update process:

- **UPDATE:** allows the update of the DIVA master unit.
- **Slave update:** allows the update of all slave units in the system.
- **PSS Update:** allows the update of the PSS console.
- **PSS Update:** allows the update of the PSM/CD16 microphone consoles.
- **Ethernet-PSS Update:** allows the update of all the Ethernet PSS found in the network.

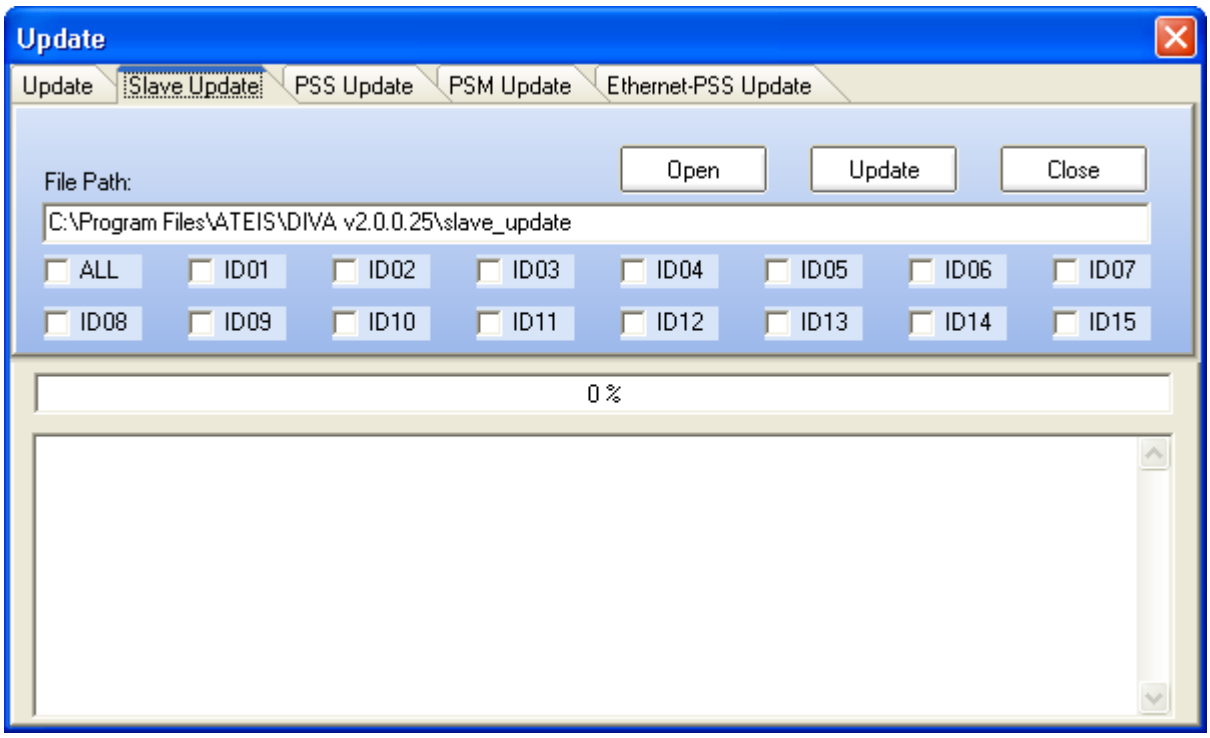
To perform update you need to have the user level 4 rights. Once clicked on the update button, you will be prompt to enter an username and password if not already logged in.

9.13.1. Update Master Unit



- **Open:** Here you can specify the path of the MCU update file. By default, the path specified correspond to the software release version.
- **CRC:** displays the CRC check code corresponding to the firmware. This CRC code can be compared to the one that can be read from the front panel.
- **Update:** will start the update process.
- **Close:** closes the window.
- **Timeline display:** shows the update process progression.
- **General Display:** displays the update information.

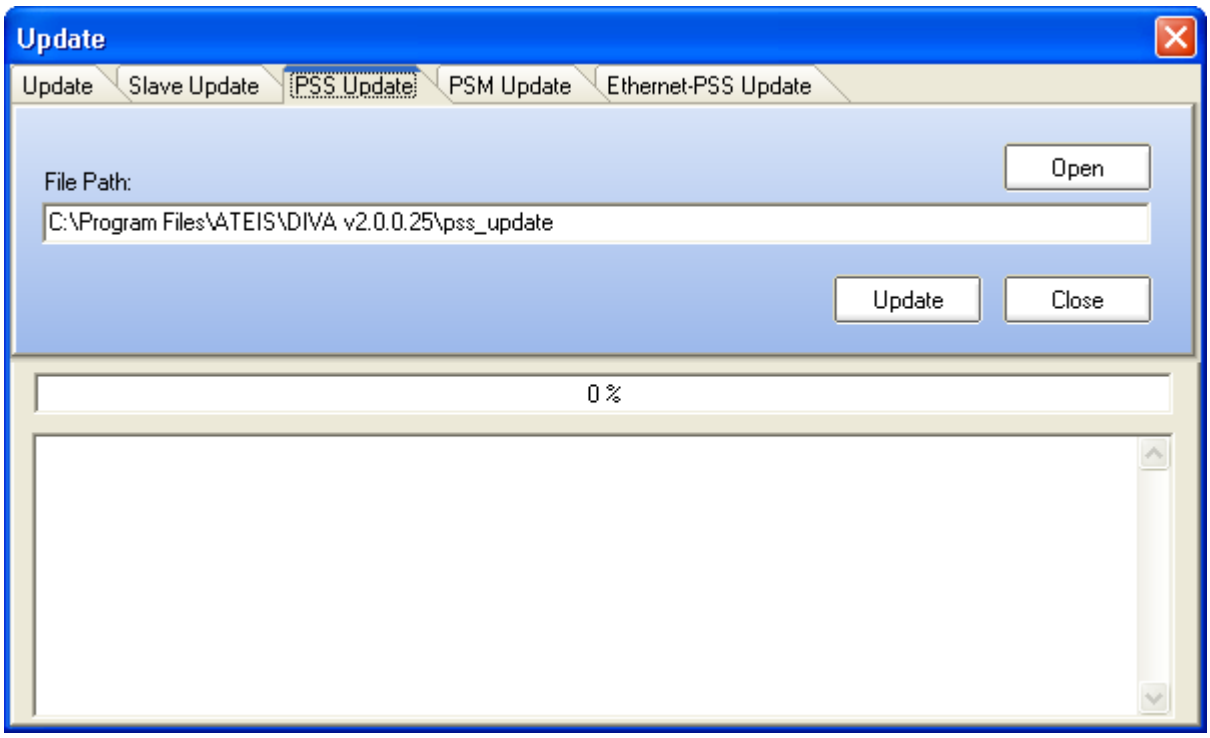
9.13.2. Update Slave Unit



- **Open:** Here you can specify the path of the MCU Slave update file. By default, the specified path corresponds to the software release version.
- **Update:** will start the update process.
- **Close:** closes the window.
- **Timeline display:** shows the update process progression.
- **General Display:** displays the update information.

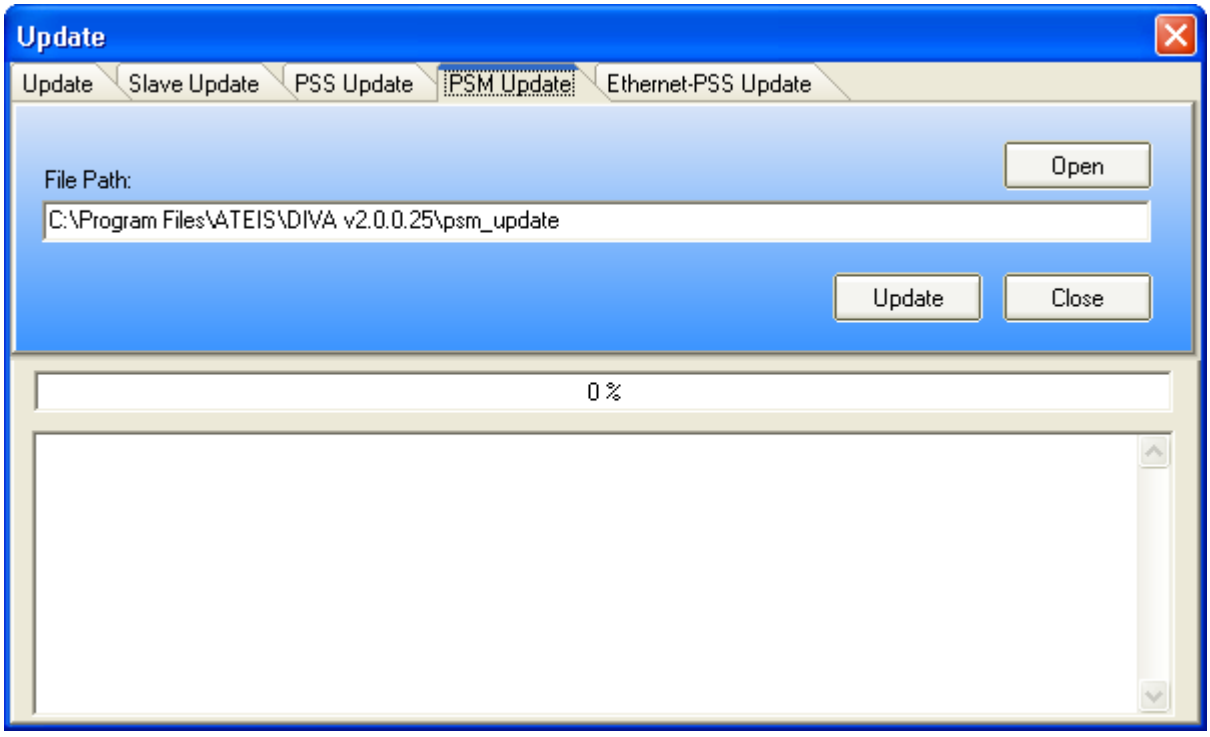
All the slaves in a system can be updated at once. Choose the Slave unit you want to update by checking the corresponding check box.

9.13.3. Update PSSG2



- **Open:** Here you can specify the path of the PSSG2 update file. By default, the path specified correspond to the software release version.
- **Update:** will start the update process.
- **Close:** closes the window.
- **Timeline display:** shows the update process progression.
- **General Display:** displays the update information.

9.13.4. Update PSM/CD16

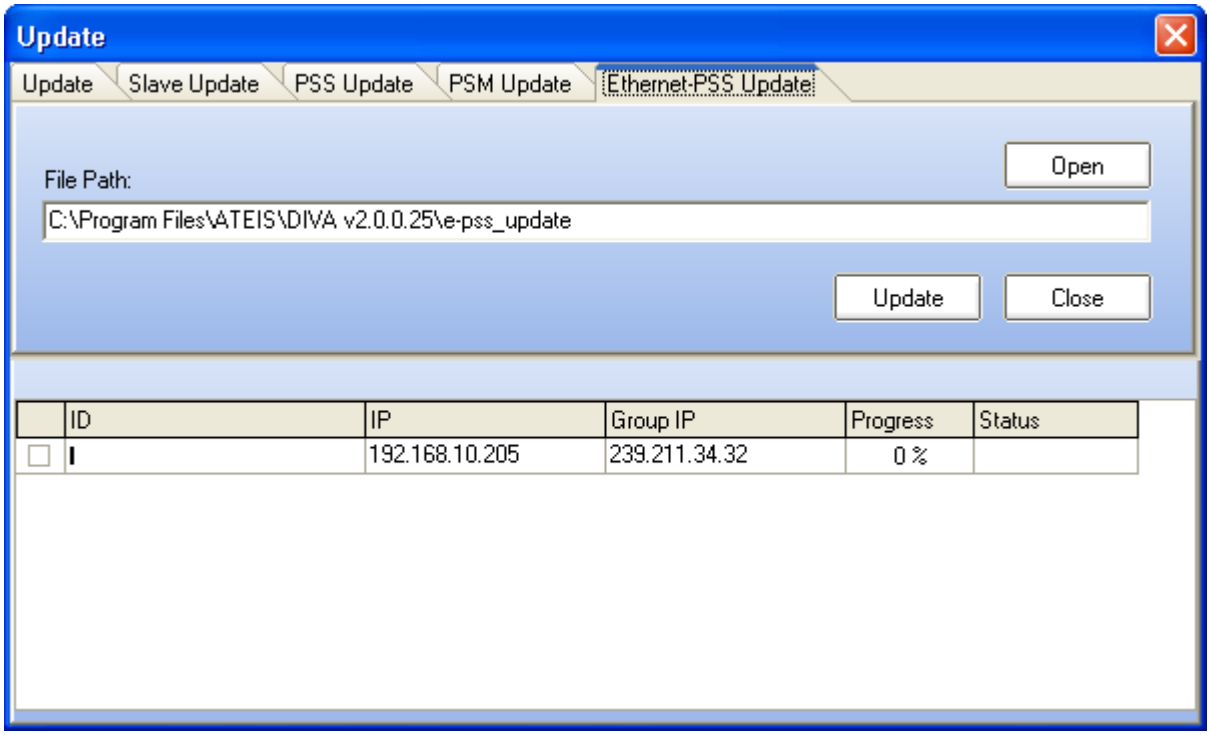


- **Open:** Here you can specify the path of the PSM/CD16 update file. By default, the specified path corresponds

to the software release version.

- **Update:** will start the update process.
- **Close:** closes the window.
- **Timeline display:** shows the update process progression.
- **General Display:** displays the update information.

9.13.5. Update PSSG2-E



- **Open:** Here you can specify the path of the PSSG2-E update file. By default, the path specified correspond to the software release version.
- **Update:** will start the update process.
- **Close:** closes the window.
- **General Display:** displays all the Ethernet PSS information as well as the update progression.

9.14. Compile

Compiling your current project will inform you in case of configuration errors or warnings. In order to be able to store a configuration into DIVA, you will have to compile your project first.

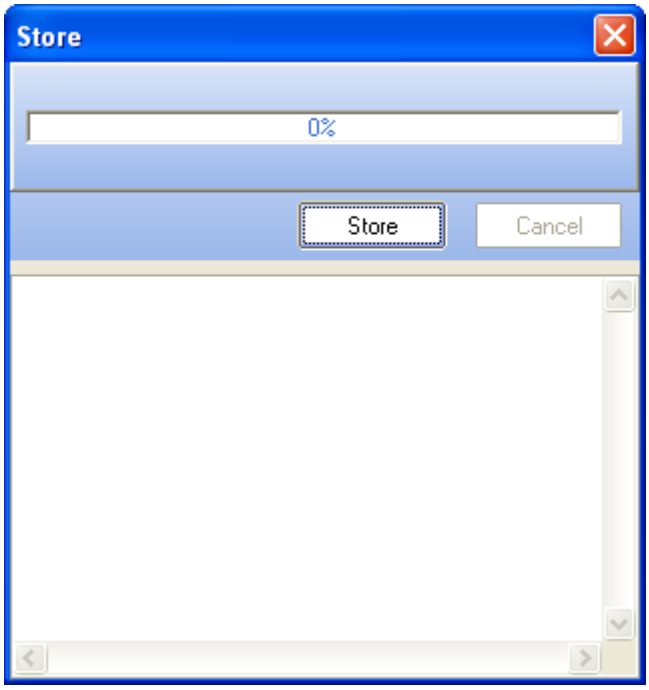
To compile go in the menu: Operations -> Compile or Click on the Compile icon in the compile toolbar (view picture below) or even type F9.

On the Status Bar, you can permanently see the compile status of your project:

- **Compiled:** means the current state of your project have been checked
- **Not Compiled:** means that your current project has not been checked

9.15. Store

The store command, menu Operations -> Store or the Store shortcut or even F8, open the store window, see below.



To start storing, click on the "Store" button.

A timeline display the status of the process. The different states of the store process are written in the Store Status Area.

If not already log in, DIVA software will ask you to enter a valid user name and password.

Once the store process is finished, you will be prompt to:

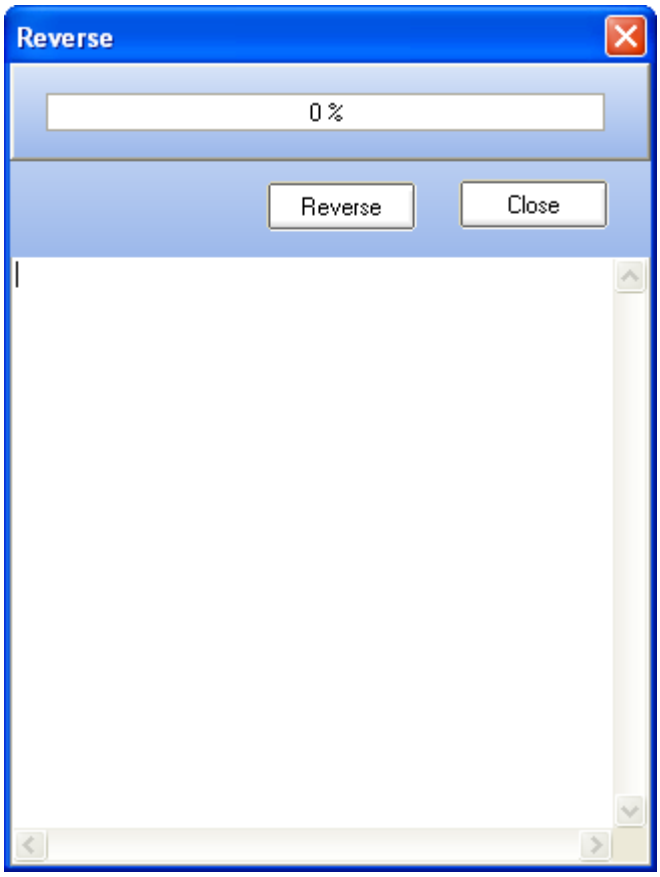
- Connect to DIVA? choose Yes or No
- Enable Audio on DIVA? choose Yes or No

9.16. Reverse

The reverse command allows to download from DIVA to the software the current configuration stored into DIVA.

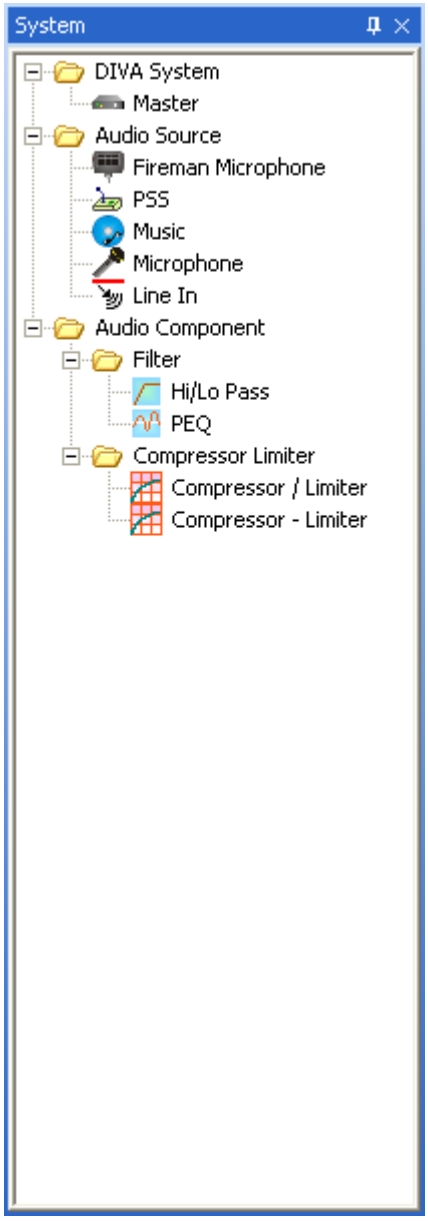
- To start the reverse process, go to the menu Operations -> Reverse or use the Reverse Shortcut on the compile toolbar
- Click Reverse, you can follow the advancement of the process on the timeline display

The reverse window will be open, see below.

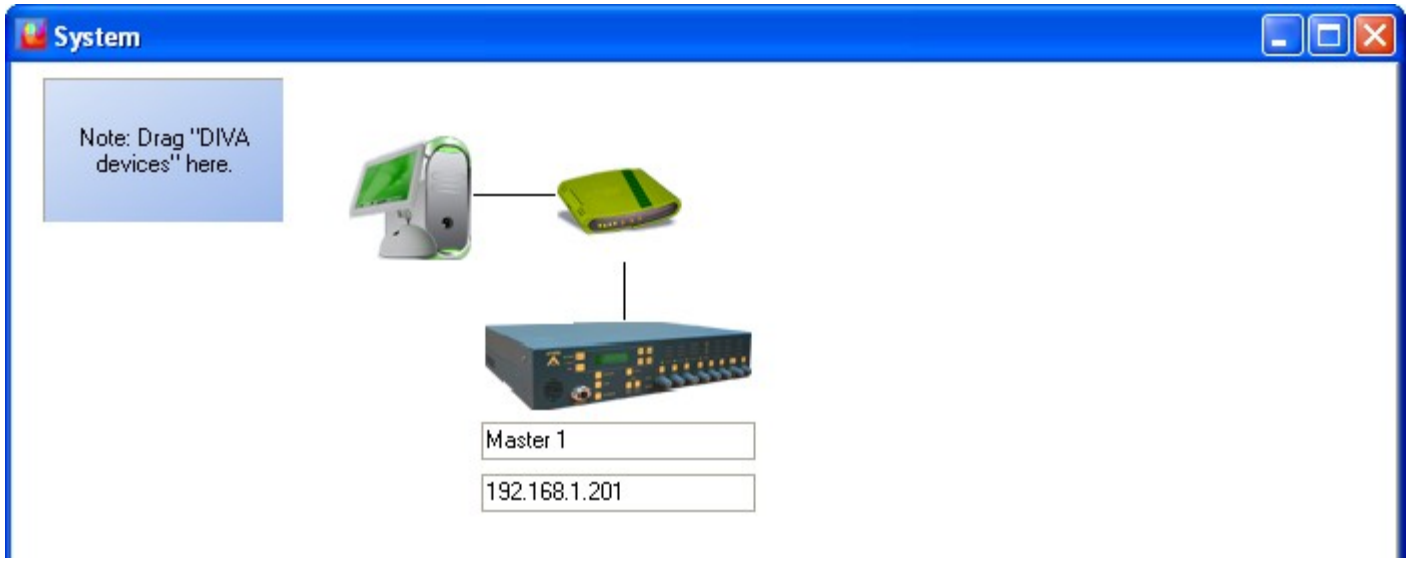


9.17. Add Design Component

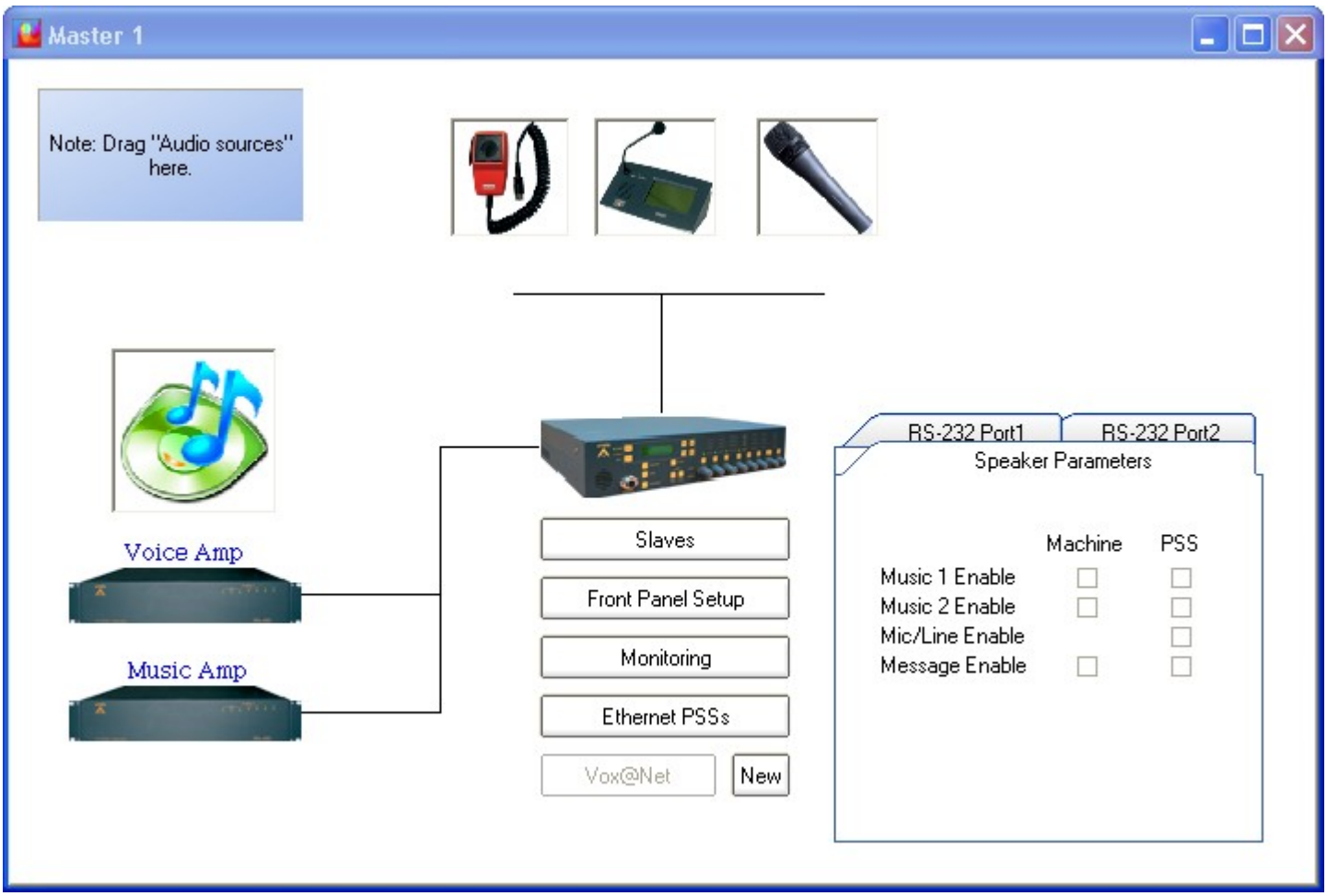
After starting a new project, the "System" window is opened. On the left, you will find the Design Component Section. The DIVA software have been made to simply add/remove component. All the components are 'drag & drop' items. Each component can only be dropped in its own place.



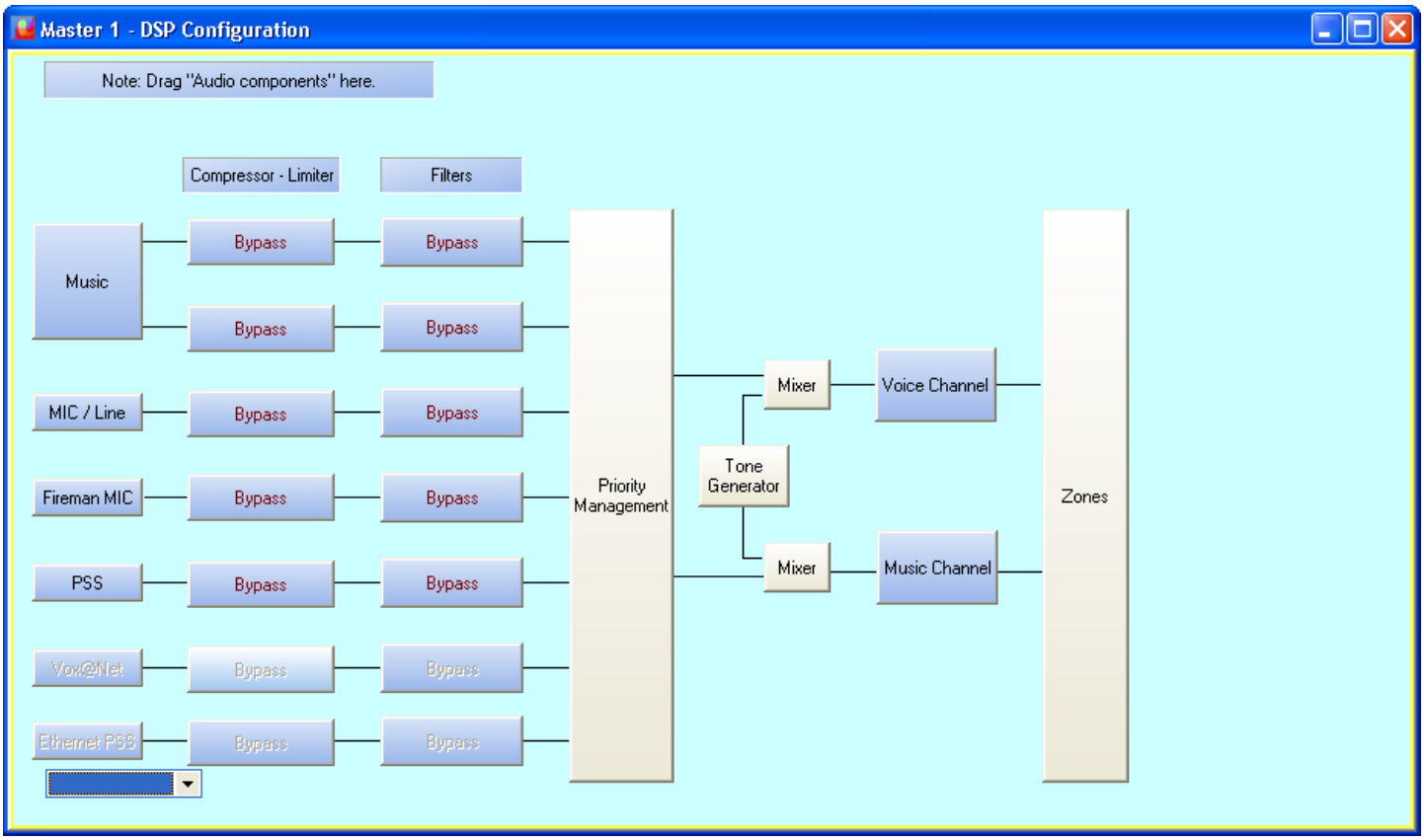
- The DIVA Slave unit can only be dropped in the System main window, see below.



- Audio sources, Audio Sources folder, can only be dropped in the Master window and only in the right location, see below



- Hi/Lo Pass filters, PEQs and Compressor/Limiter, Audio Component, can only be dropped in the MASTER-DSP Configuration page on existing connection, see below.



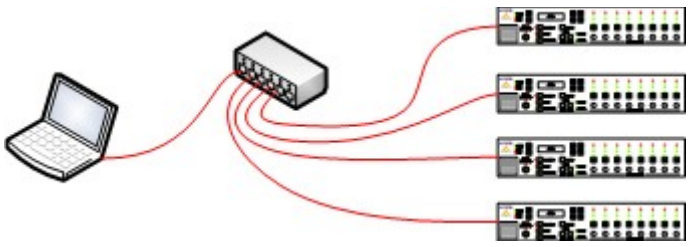
9.18. Perform a Diva Master Network

As briefly explained before, you can put several DIVA master on a same network. The DIVA master network is based on Ethernet protocol. Keep in mind that DIVA slave unit are not on Ethernet network. In order to complete a DIVA network you will need the following devices:

- Ethernet Switch/Hub
- Multiple DIVA8M units
- A computer

Before connecting those devices on the network, you need to check the IP address of each DIVA master units and set each DIVA IP address corresponding to your project's network. By default, a new DIVA8M unit has the following IP: 192.168.100.100. See How to Set IP Address.

Link the DIVA master units and the computer to the Ethernet switch, see diagram below.



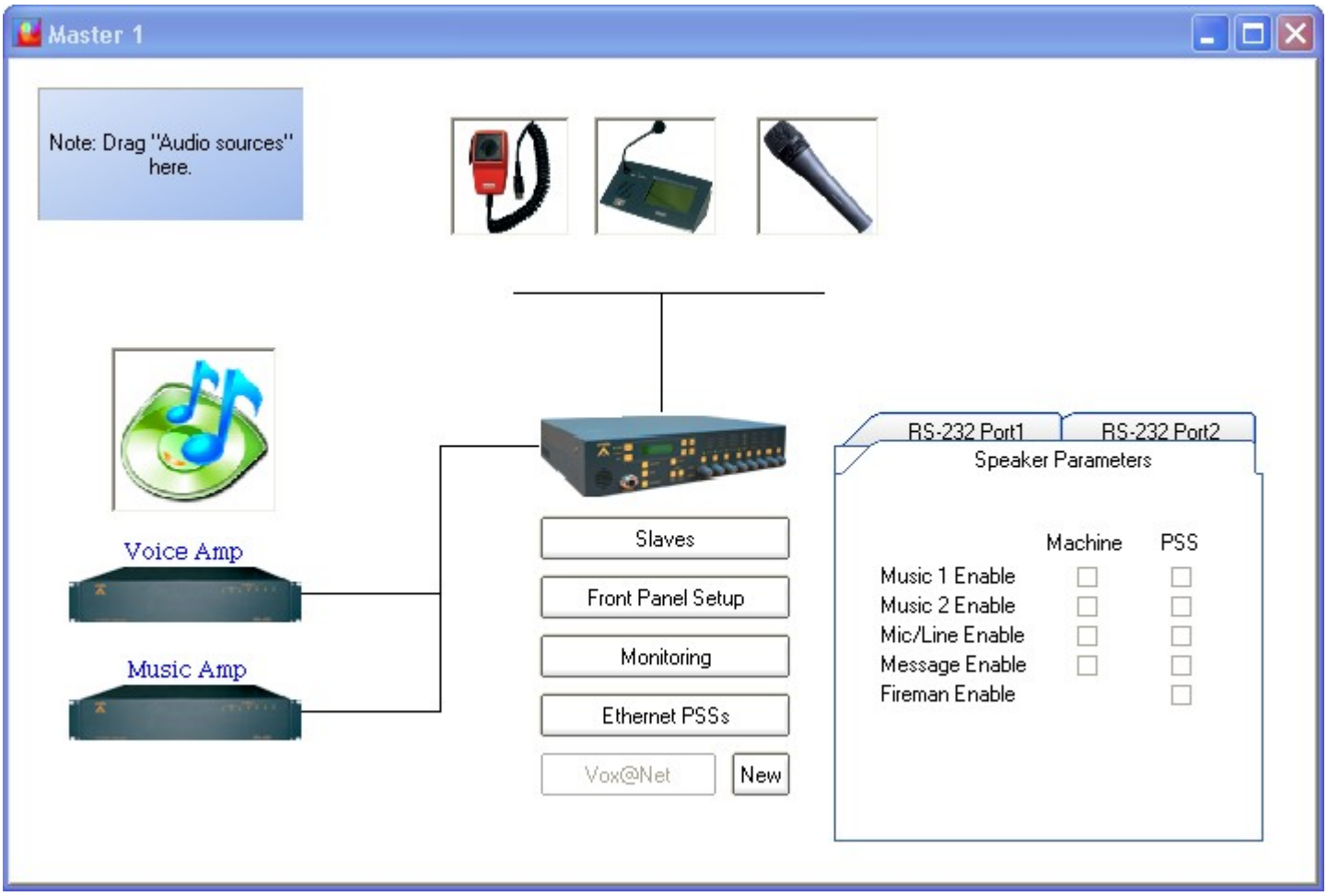
After the devices have been connected and in order to know if your network is well configured, go to the "Device Search" window: Tools -> Device Search and start a search.
If some DIVA master aren't visible, please check wiring and/or IP address settings. Also check your computer network card parameter and be sure they are set in accordance to the DIVA network builded.

NOTE: DIVA master won't be able to communicate with each other through the network. This network only intend to offer quick configuration solution over IP.

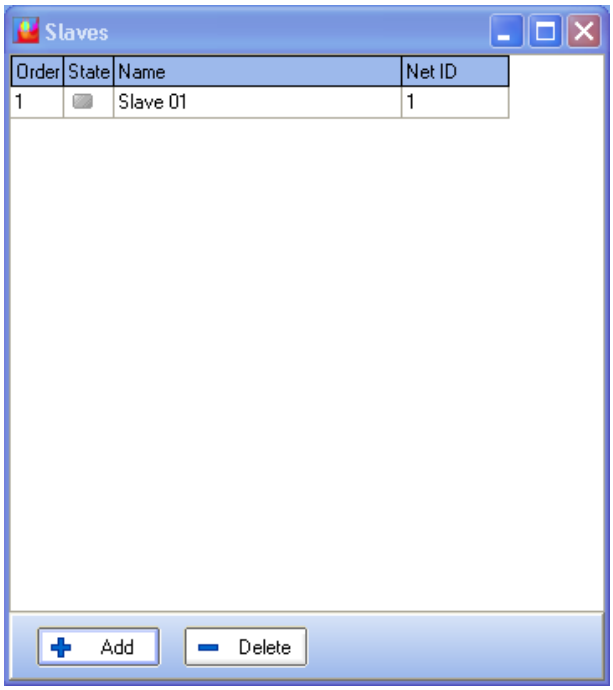
9.19. Add DIVA8S slave

From DIVA software v2.0.0.1, DIVA8S unit can be added in the configuration. In order to use slave units, follow the next procedure.

- In the Master window, click on the "Slaves" button.



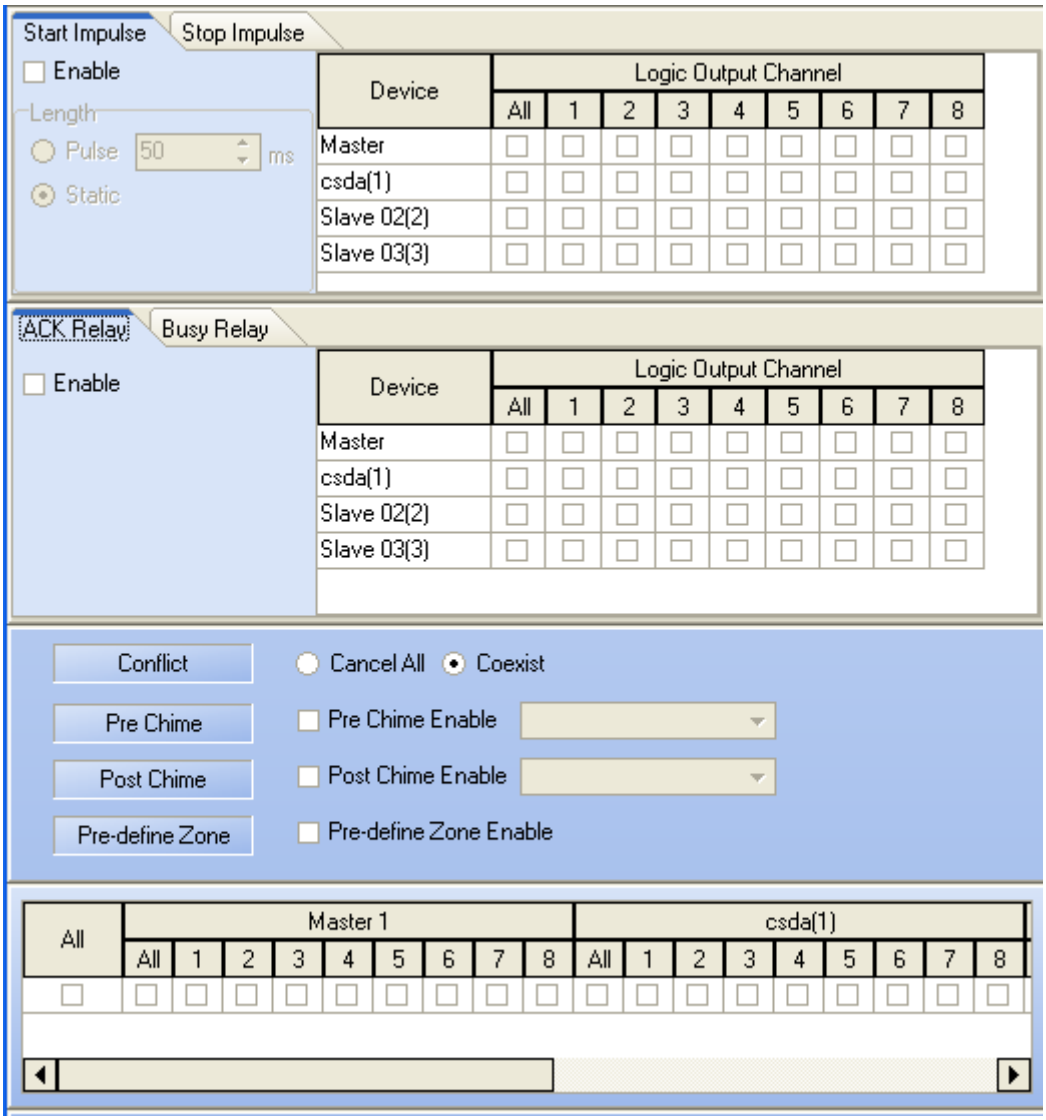
- Once click, the following window pops up.



Order: display the order of the slave from a DIVA configuration point of view (independant from ID setting).
State: indicators that shows the status of the slave unit. Only working when real-time connected to the master.
Name: displays the name of the slave unit, only for configuration purposes. The name can be changed to suit your need by simply clicking in the name box.
Net ID: displays the current slave unit ID.

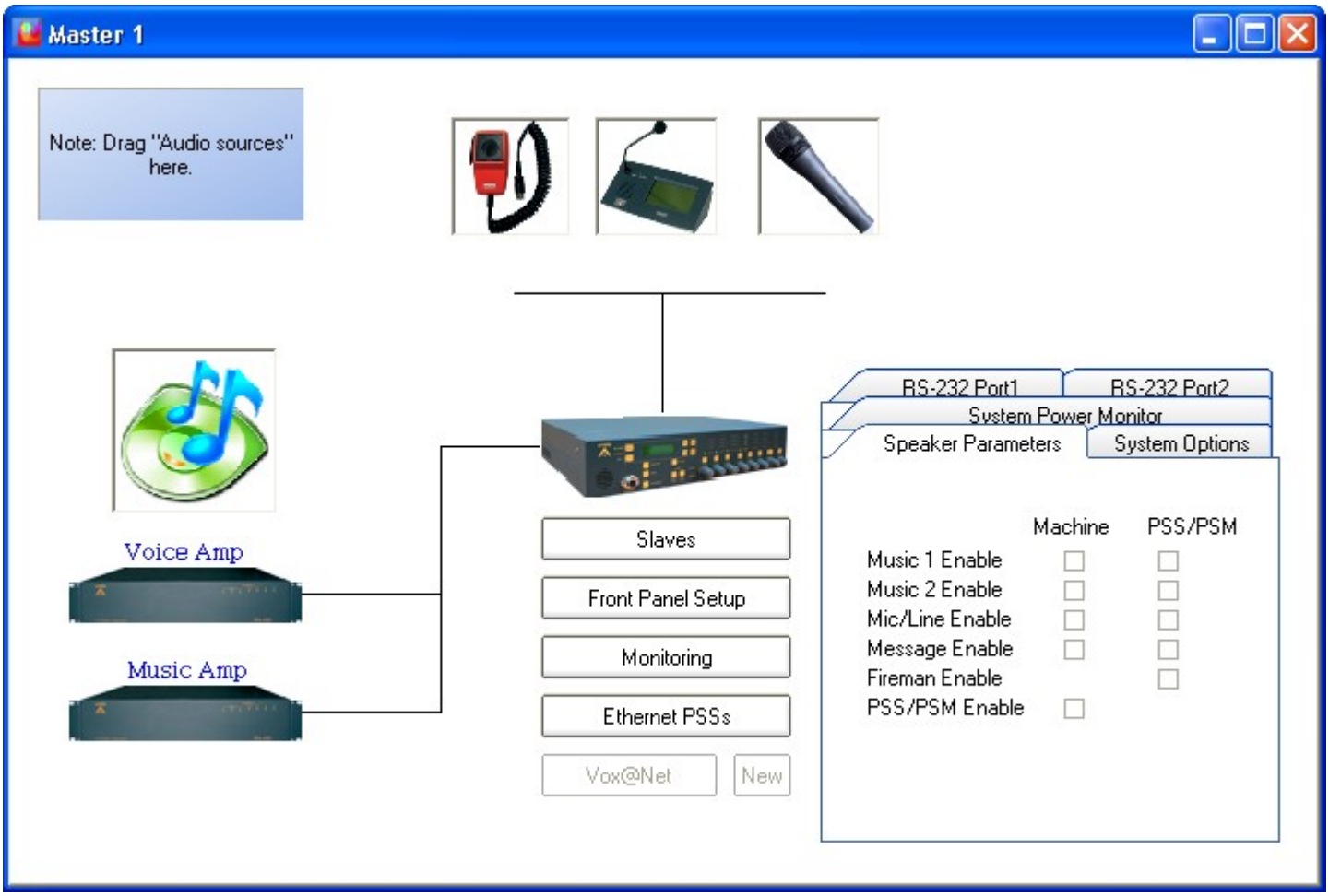
- To add a slave unit to your configuration, simply click the "Add" button.
- To delete a slave unit from your configuration, select the slave in the list and press the "Delete" button.
- For each slave added, you can specify its Net ID. Click in the Net ID box and use the appearing drop-down menu. The ID must fit the slaves' hardware ID settings.
- Once all the slaves have been set in the configuration, make sure to verify their firmware version using the version menu and update version if needed.

When slaves are configured as existing, in all zone selection sub-menu, the slaves' zones will appear as selectable as well as slave GPIO relay, see below for an example. Using slave does not change the way you'll program the DIVA, it only add more contacts and zones.



9.20. Set Speaker Parameters Setting

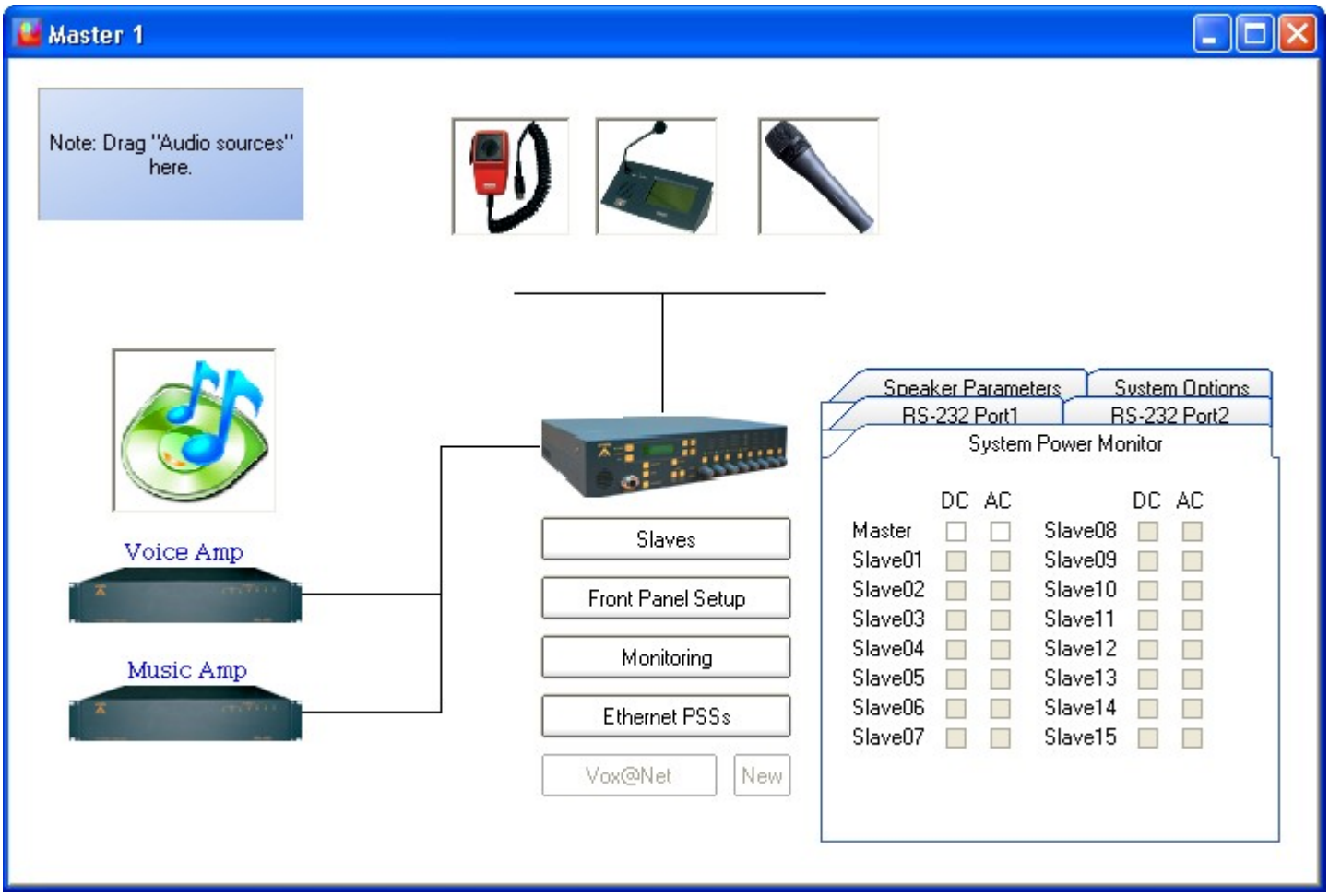
The speaker parameters setting allow to route to the PSS internal speaker and the DIVA internal speaker music sources, mic/line and messages. In order to route those different devices, go on the Master window and tick respectively the sources to be routed to the DIVA and/or the PSS.



- **Music 1 Enable:** by ticking this option, the music source 1 will be routed either on the DIVA monitoring speaker or PSS speaker.
- **Music 2 Enable:** by ticking this option, the music source 2 will be routed either on the DIVA monitoring speaker or PSS speaker.
- **Mic/Line Enable:** by ticking this option, the Mic/Line source will be routed either on the DIVA monitoring speaker or PSS speaker.
- **Message Enable:** by ticking this option, the messages will be played either on the DIVA monitoring speaker or PSS speaker.
- **Fireman Enable:** by ticking this option, the messages will be played on PSS speaker. For feedback reason, the fireman microphone cannot be routed to DIVA monitoring speaker.
- **PSS/PSM Enable:** by ticking this option, the PSS/PSM paging will be played either on the DIVA monitoring speaker.

9.21. Set Power Monitor

Diva master and slave unit can be ordered with an optional 230VAC power socket for non EN-54 compliant installation. In that case, you are able to select the power supply monitoring mode for the master and each slave: DC (24V) or AC (230V)

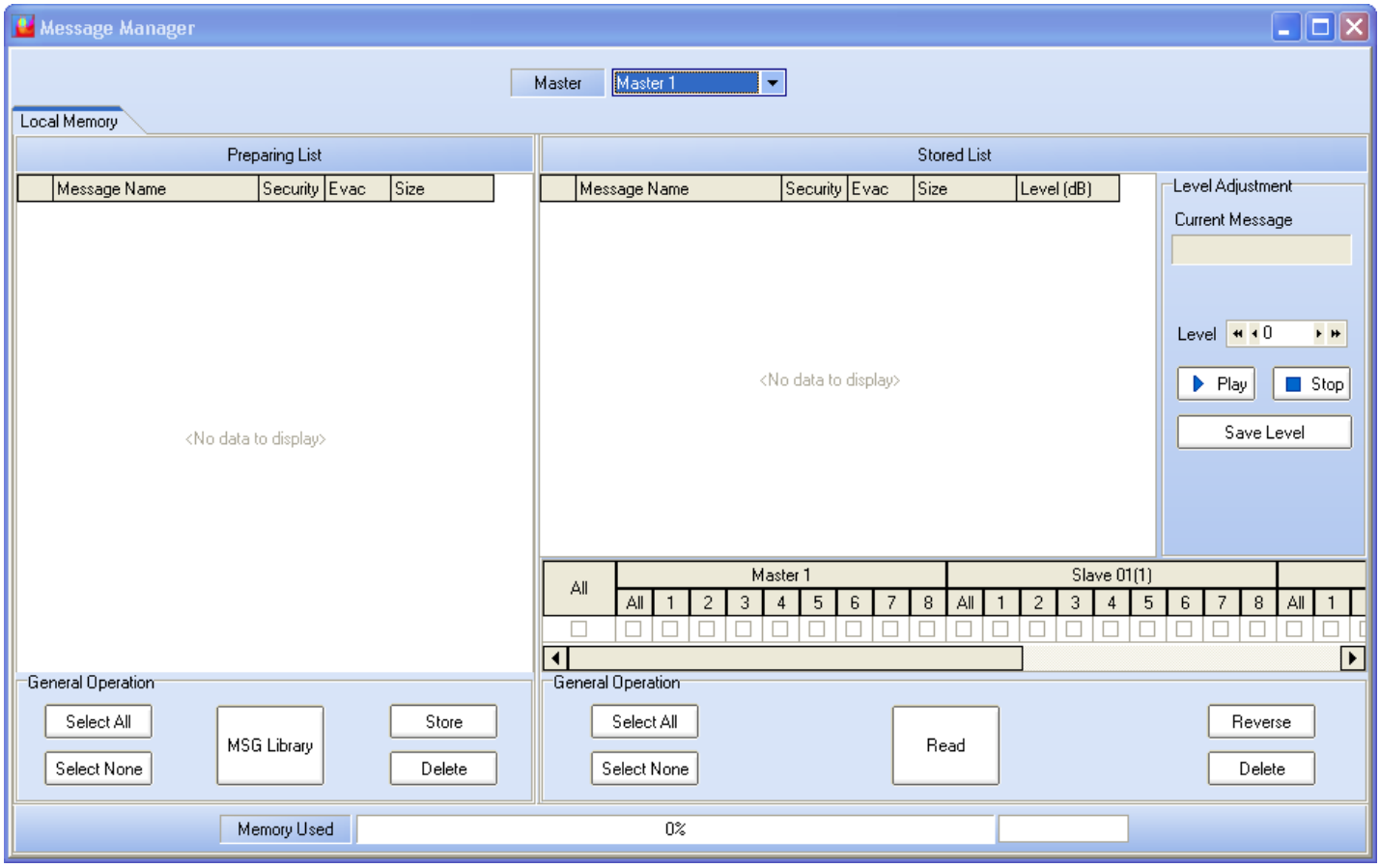


- To activate or deactivate the DC monitoring, simply tick or untick the corresponding device DC checkbox.
- To activate or deactivate the AC monitoring, simply tick or untick the corresponding device AC checkbox.

9.22. Add Messages Into DIVA

In order to store messages into DIVA memory, you have to use the message manager window.

- Go under menu: View -> Message. The message window will pop up, see below
- In the upper part of the Message window, you can select the DIVA master unit you want to work on for messages

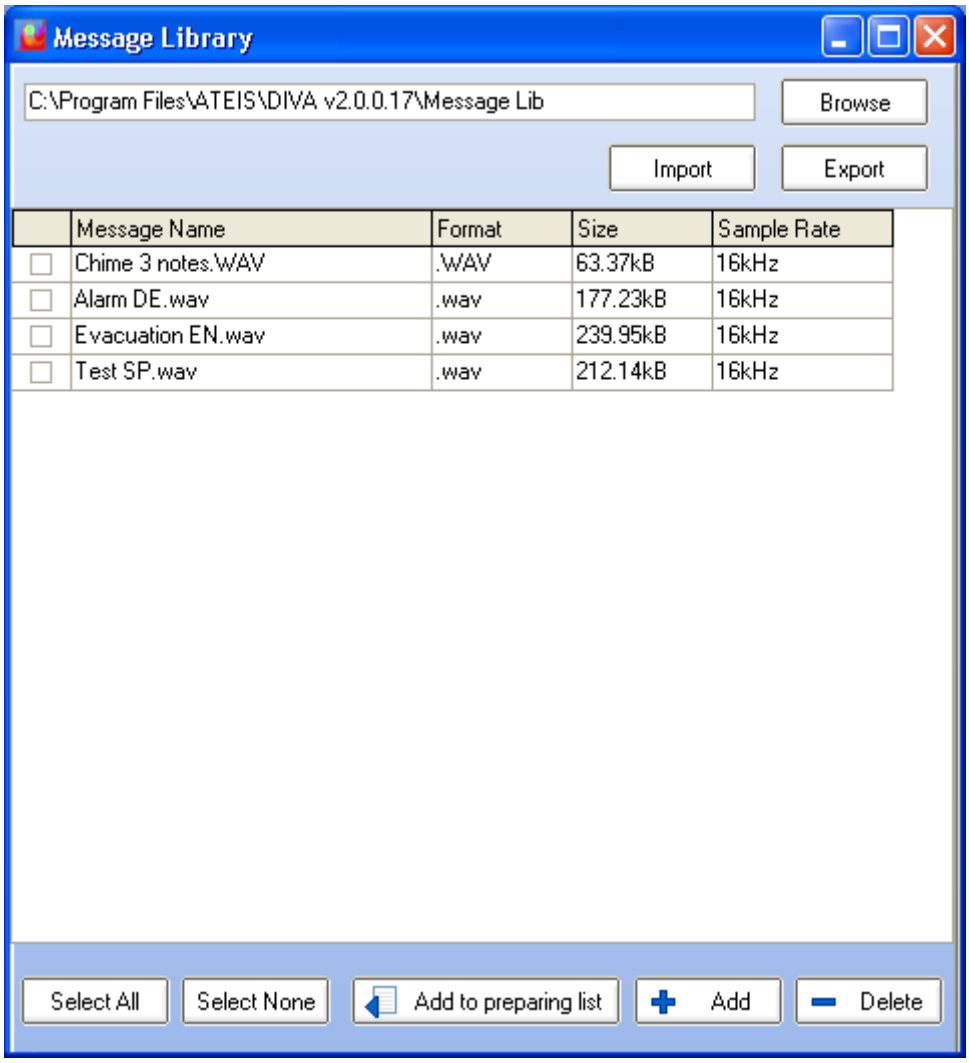


The message window is divided in two sections, one for the message taken from the message library (left one) and one for the messages stored in DIVA (right one). Here is a list of buttons and their corresponding function.

- **Select All:** allows to instantaneously select all the messages from the list
- **Select None:** instantaneously deselect all the selected message
- **MSG Library:** will open the message manager
- **Store:** Stores permanently the selected messages into DIVA's memory
- **Delete:** deletes selected messages from the store list

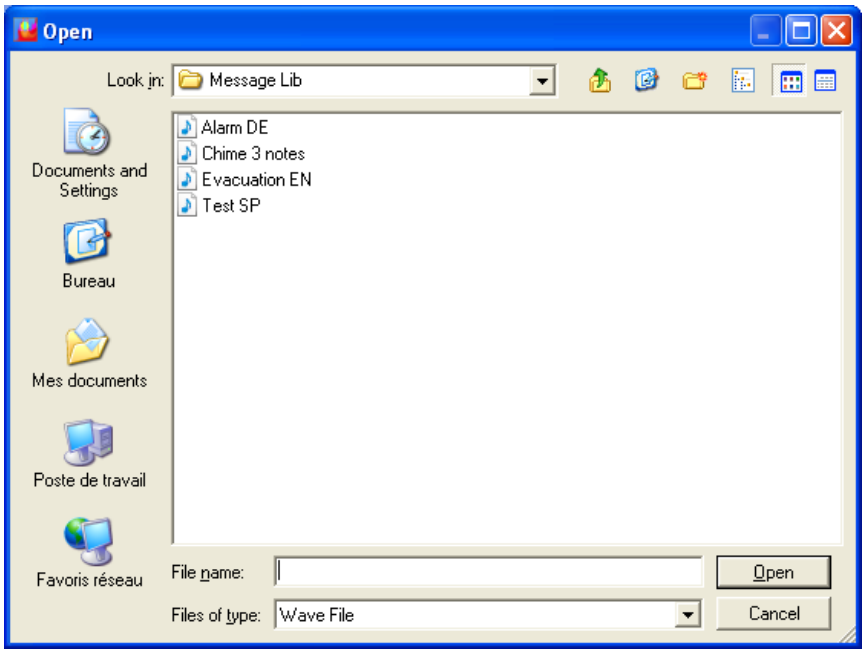
- **Read:** reads messages stored into DIVA unit
- **Delete:** deletes messages from DIVA memory
- **Select All:** allows to instantaneously select all the messages from the list
- **Select None:** instantaneously deselect all the selected message

To add messages to DIVA, you need to access the message manager Library by clicking on "MSG Manager". The Message Library window will pops up, see below.



- Select the message by ticking the check box
- Click the "Add to Preparing List" button.

In the message library window, you can add and delete messages. Clicking the Add button will open a new window, see below. In this window you can select any wave file to be a message. **Note: Only 16 kHz 16 Bits format will be stored. DIVA can handle up to 45 minutes of messages at this format.**



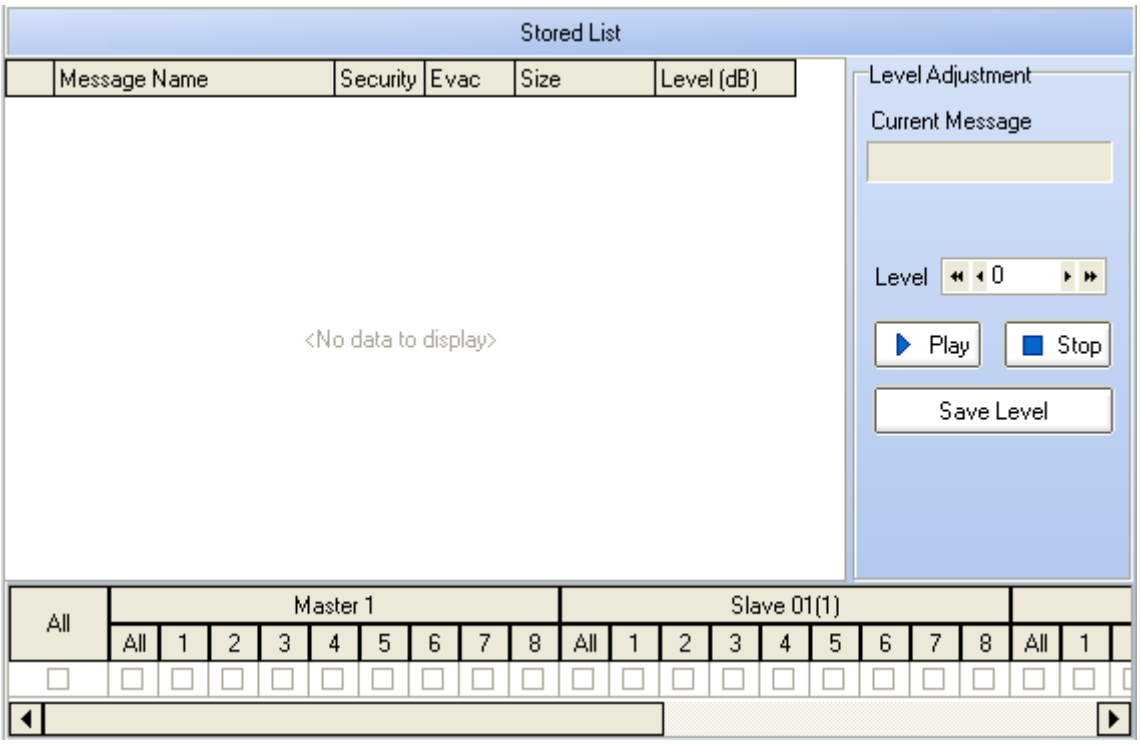
By using the Import/Export buttons on the Message Library page, you are able to import and export complete message library.

After adding messages from the library to the message manager, the procedure to store them into DIVA is as follow:

- tick the messages you want to store and specify whether they are security messages and an evacuation message
- Click Store to start the store process

Once messages are stored into DIVA, you can adjust independently their level. Follow the next few steps:

- Select a message in the list, the name of the message will be displayed in the Current Display indicator.
- Select a zone where you want the message to be played.
- Press the Play button to start playing the message.
- Adjust the level with the arrow keys.
- Press the Stop button to stop playing the message
- Press the Save Level button to save the current level into the memory

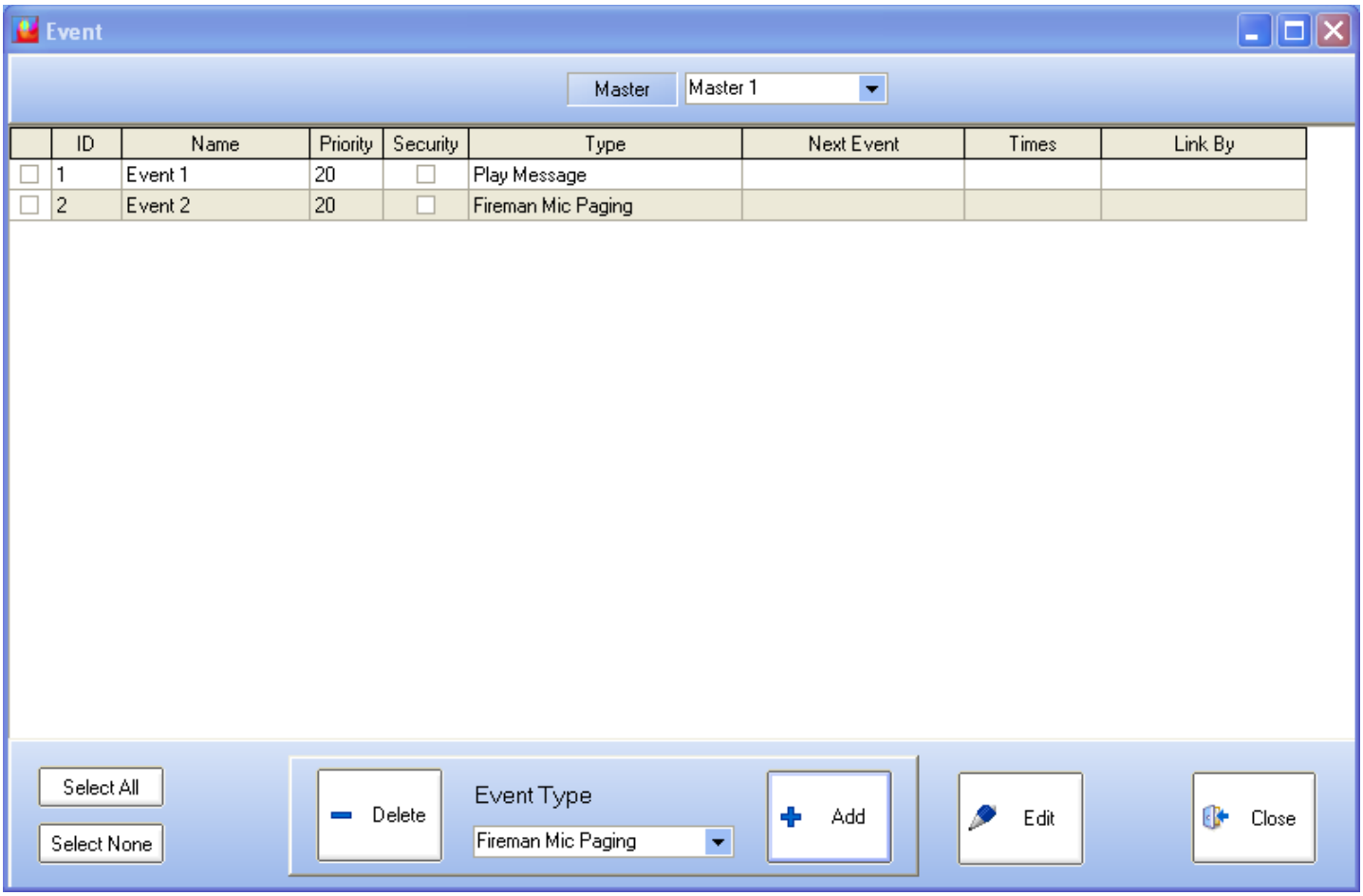


Note: Each message have an individual level setting, so each message could have a different level. Keep in mind that the message level cannot be set differently for each zone.

9.23. Use Events

As briefly explained before, the DIVA action is based on event philosophy. Each action is described in event. Event can be started by different type of trigger.

The events created by any manner are all listed in the event page window. To access this window, go to the menu View -> Event. In the Event window, you can managed all the event created and see the priority hierarchy, next event called, sequences and calling event.



- **Master:** here you can select which master events' list you wan to work on

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- **Square Selector:** you can select event(s) by ticking the square selector at their right.
- **ID:** The events created are identified with one number, the ID number.
- **Name:** displays the event's name. You can specify a name for an event when editing the event. By default the name is set to Event X.
- **Priority:** displays the priority level of an event.
- **Security:** displays if the event is a security one or not.
- **Type:** displays the type of the event.
- **Next Event:** displays which event is called after this event.
- **Time:** if an event loop has been created, displays the number of time the loop is made.
- **Link By:** displays the trigger that will activate the event.

- **Select All:** select instantaneously all events in the list
- **Select None:** deselect instantaneously all selected events

- **Delete:** delete selected event from the list
- **Event Type:** here you can select the event type that you want to create. This have to be made before press the Add button
- **Add:** after the event type selection, pressing the Add button will create the new event in the list
- **Edit:** after creating an event, you will have to edit all its parameters. By clicking the edit button, you will enter the different event setting windows
- **Close:** closes the Event window

There are different types of event and here is a list of all events that can be created. Note: some event created by accessing the music, fireman microphone and MIC/LINE windows are automatically named and offer settings that could differ from those described in this chapter.

- **Load Preset**
- **Logic Output**
- **Command String**
- **Stop Event**
- **Stop Zone**
- **Play Message**
- **Fireman Mic Paging**
- **MIC/LINE Paging**
- **Music ON**
- **Music OFF**
- **Music ON By Zones**
- **Music OFF By Zones**
- **Toggle Music ON/OFF**
- **Toggle Music ON/OFF By Zones**
- **Security Mode**
- **Stop All Event**
- **Silence Zone Event**

9.23.1. Common Options

Security Option:

The Security option is common to all event type. If the security option is selected, this event will be able to be started when DIVA has entered the security mode.

This mode have been created to enter a power safe mode in case of power supply failure, in order to save energy when supply by emergency battery. This mode is automatically launched when using External Fault Inputs.

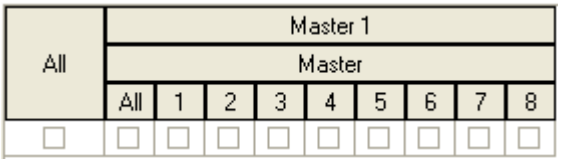
Evacuation Option:

The evacuation option is offered on all "play message" type of event and on all event related to audio sources. This option is only accessible after having selected the Security option. In fact, an event could only be an evacuation event if it is already a security one.

The evacuation option allows the event to be understood by the machine as an evacuation occurrence. For instance, a play message event with the evacuation option defined will light up the front panel EVAC LED instead of the PAGE LED.

Zone Selection:

In many event you will be able to choose some pre-defined zones. Here is the zone selector display and explanation.



From Left to right and up to down

Master 1: correspond to your project name (master unit plus slave ones)
- **All:** selects all zones of master and slave(s) units

Master: means master unit
- **All:** selects all zone of the master unit
- **1-8:** allows to select independently zone 1 to 8 from a master and/or slave unit

Cancel All and Coexist options

The Cancel All and Coexist options have been created to manage conflict when two events using common zones.

The higher priority event always overwrites the lowest priority event in the common zone. But regarding to the option chosen, the behaviour is different.

To learn more, please read this.

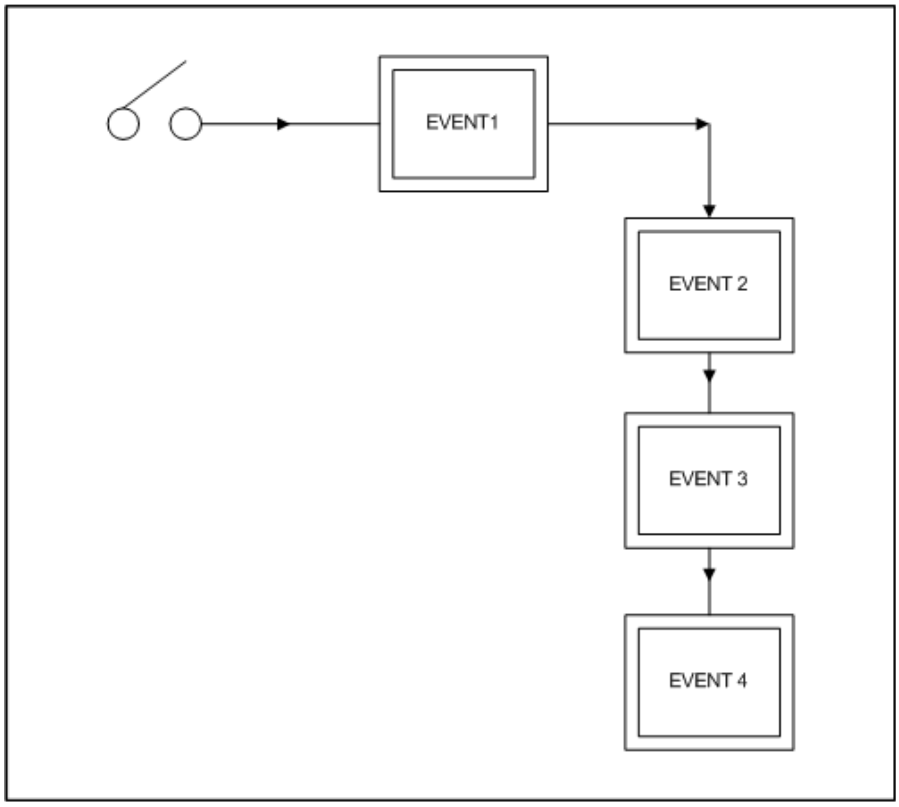
9.23.2. Event Sequence

You can define multiple events by accessing the event window (menu “View -> Event”). In this window, all the existing events are listed. You can add/delete events.

Before adding a new event, choose in the “Event Type” drop-down menu the desire event’s type. Click on the new event then “Edit” to be able to set up parameters for this new event.

You can declare event with the same action, like playing a message (even playing the same message). You just have to give them different names.

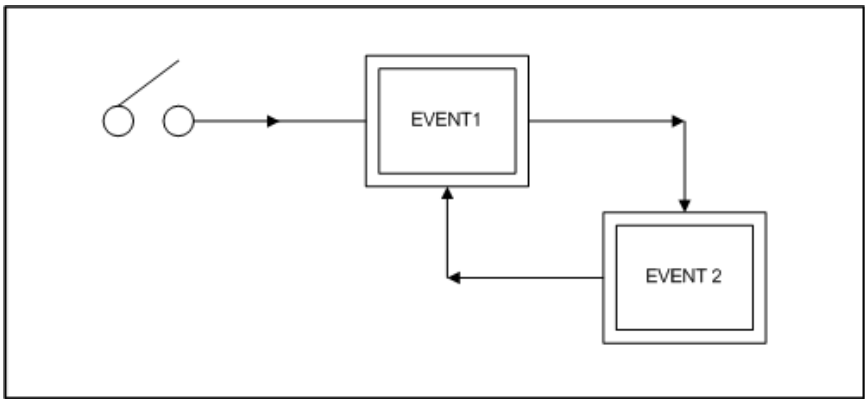
The event can be cascaded. An explanation diagram is visible on the next figure.



An action like closing a contact could induce to start an event. But as soon as the first event is finished or stopped, the second event will be launched. The second event could activate the start of a third event, and so on.

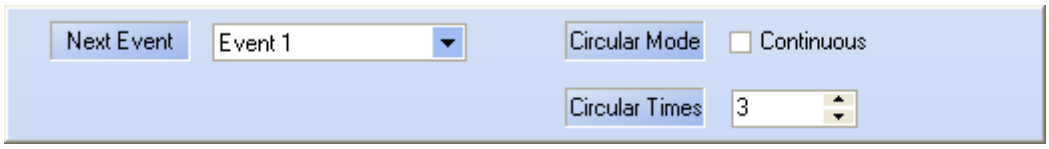
In each event edit page, there is a next event drop down menu, see below. In this menu you will be able to choose between all the existing events.

Events could also be looped. The diagram on figure below explains it visually.

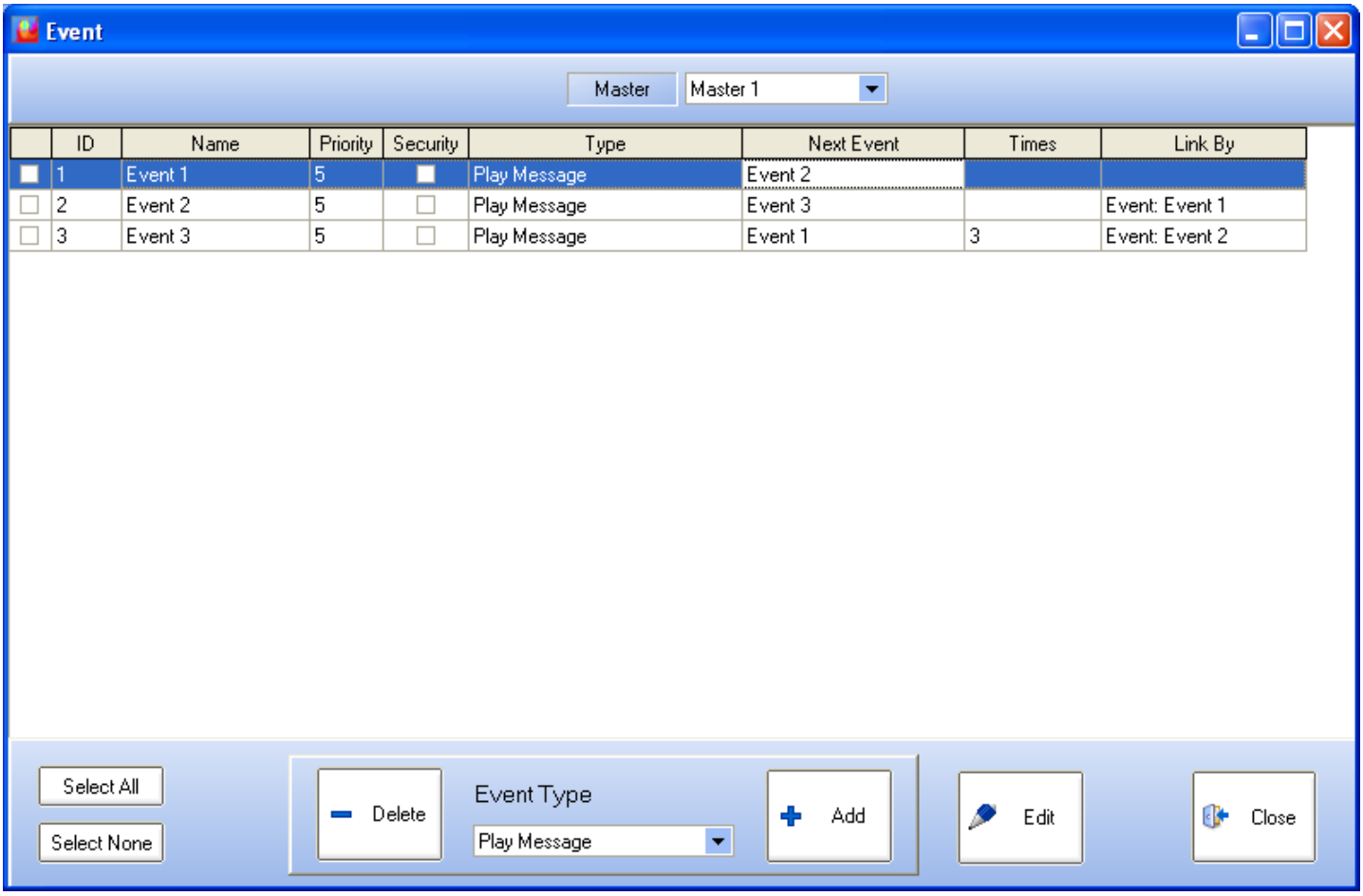


According to the looping event diagram, when selecting next event for “Event 2”, choose “Event 1”. As soon as you select an event that is before in the chain, a new “Circular Times” selector is visible just beside the next event drop-down menu (see below). This selector permits to define how many times the events’ loop will be repeat or to make it continuously repeating.

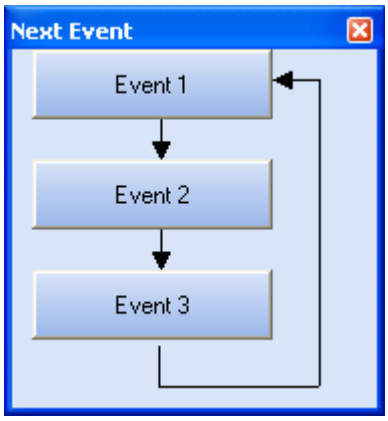
This is a quick way to loop different language evacuation messages for example.



Once you go back in the event window. You can see multiple information about sequences like the next event that is called (Next event), the number of time the loop is repeated (Times) and the event or action that is linked to one event (Link By), see picture below.



By clicking at the right of the Next Event box, you will be able to graphically display the event sequence or loop, see below.



9.23.3. Event Type

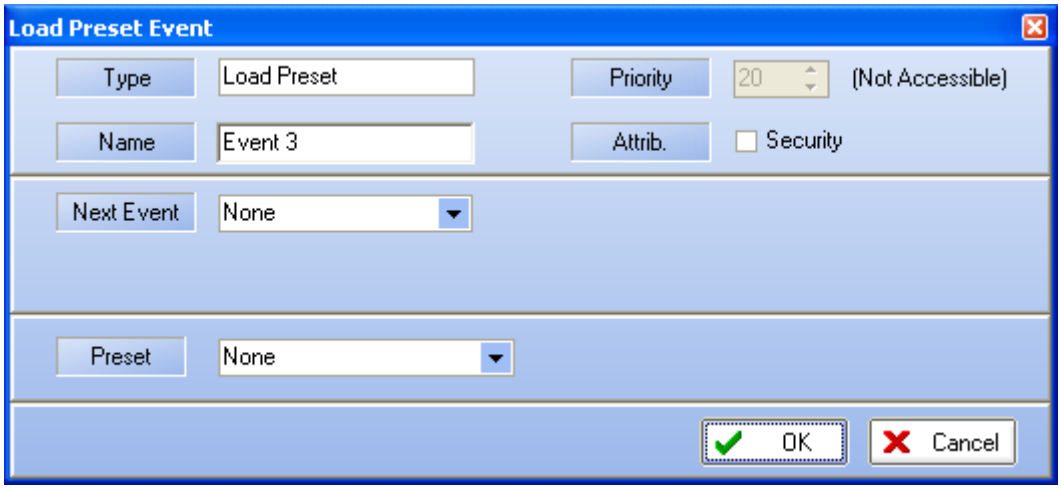
In the Next paragraph, you will fin a description of all the different event that could be found in DIVA programming. You will by this way learn how to use them and when to use them.

- **Load Preset**
- **Logic Output**
- **Command String**
- **Stop Event**
- **Stop Zone**
- **Play Message**
- **Fireman Mic Paging**
- **MIC/LINE Paging**
- **Music ON**
- **Music OFF**
- **Music ON By Zones**
- **Music OFF By Zones**
- **Toggle Music ON/OFF**
- **Toggle Music ON/OFF By Zones**
- **Security Mode**
- **Stop All Event**
- **Silence Zone Event**

9.23.3.1. Load Preset

In DIVA, you have the possibility to set preset. To learn more about presets, please read this.

The event load preset can be used as soon as there are existing preset. It allows activating a preset with different trigger like GPIO or the scheduler.



- **Type:** displays the type of event that is created, in this case Load Preset
- **Name:** here you can specify a name for the event created
- **Attrib:** here you can choose between security event or not. See Common Option to learn more about the security option

---

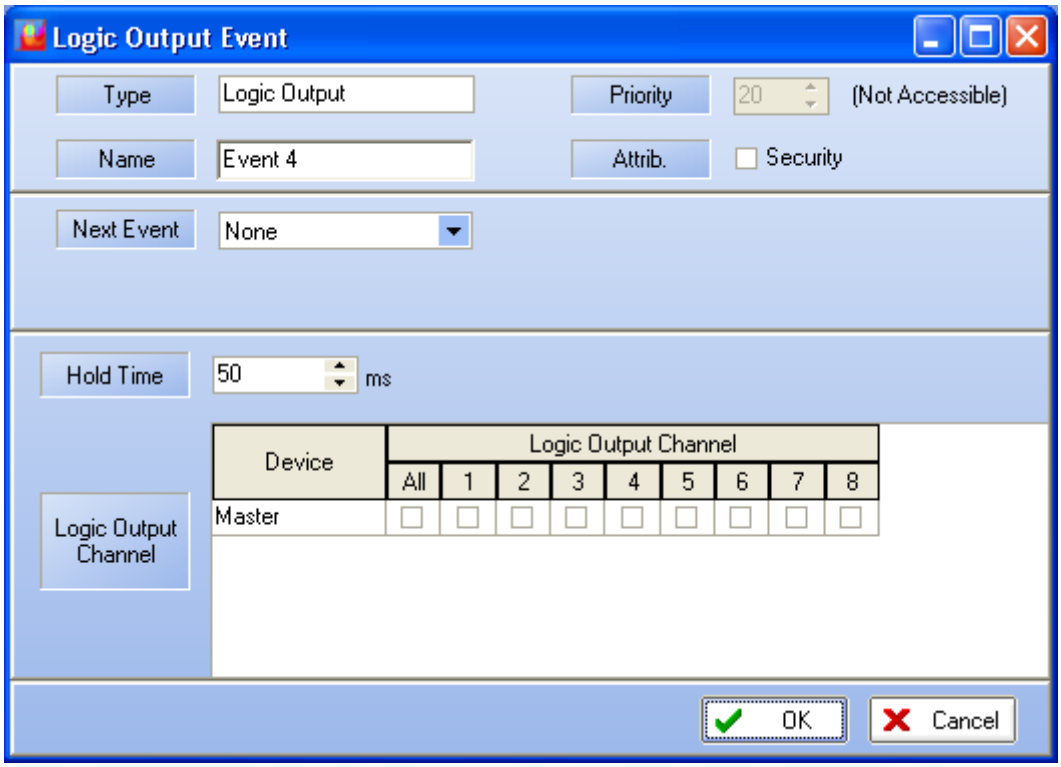
- **Next Event:** you can specify an event that will be started as soon as this event is finished

---

- **Preset:** here you can specify the preset to be loaded

9.23.3.2. Logic Output

As described before, DIVA has 8 output channels that can be commanded by several trigger type. When using the Logic Output Event, you can associate to a trigger the closing of an output.



- **Type:** displays the type of event that is created, in this case Load Preset
- **Name:** here you can specify a name for the event created
- **Attrib:** here you can choose between security event or not. See Common Option to learn more about the security option

---

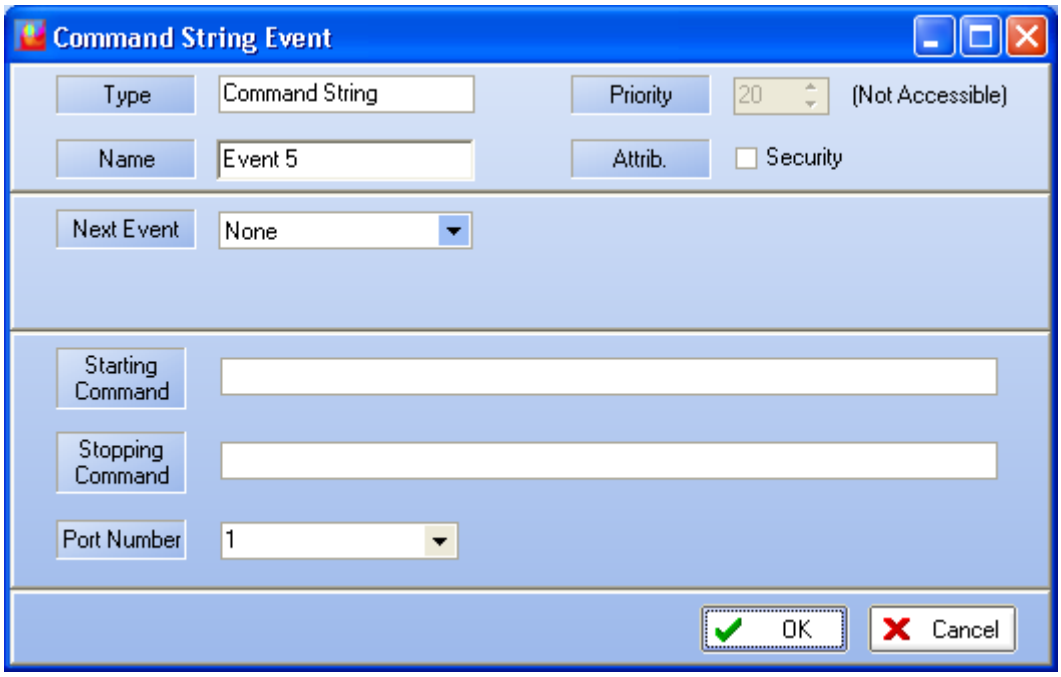
- **Next Event:** you can specify an event that will be started as soon as this event is finished.

- **Hold Time:** Ticking this option allows generating a pulse whose length can be defined from 50 to 60000 ms.
- **Logic Output:** here you can specify which output(s) you want to close when the event is triggered.

To learn more about output relay, please read the How To Use Output Relay.

9.23.3.3. Command String

With this event you can send by RS232 commands to third party devices. Valid commands are described in the Communication Protocoles chapter.



- **Type:** displays the type of event that is created, in this case Load Preset
- **Name:** here you can specify a name for the event created
- **Attrib:** here you can choose between security event or not. See Common Option to learn more about the security option

---

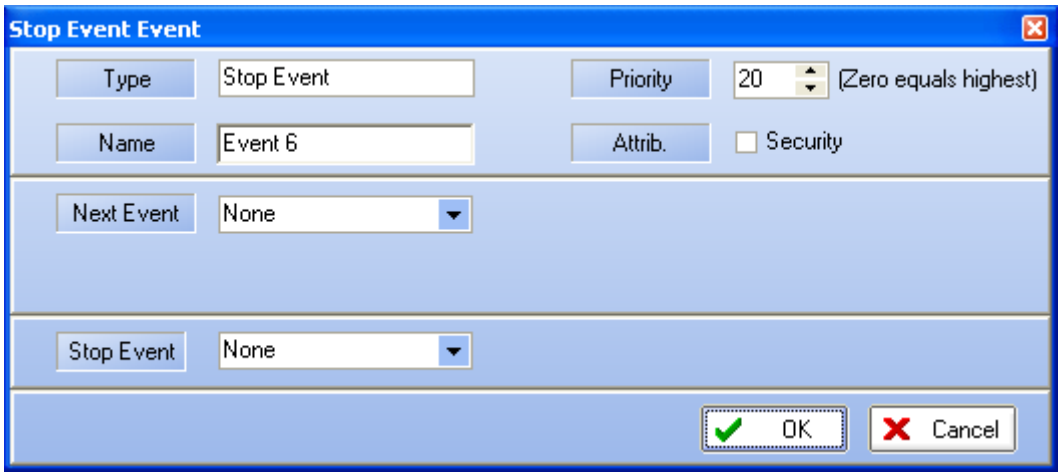
- **Next Event:** you can specify an event that will be started as soon as this event is finished

---

- **Starting Command:** here you can type in the command to be sent at the event activation.
- **Stopping Command:** here you can type in the command to be sent at the event deactivation.
- **Port Number:** here you have to specify on which RS232 port the command have to be sent.

9.23.3.4. Stop Event

This event have been created in order to be able to stop any event by the means of a trigger.



- **Type:** displays the type of event that is created, in this case Load Preset.
- **Name:** here you can specify a name for the event created.
- **Priority:** here you can choose a priority level for this event.

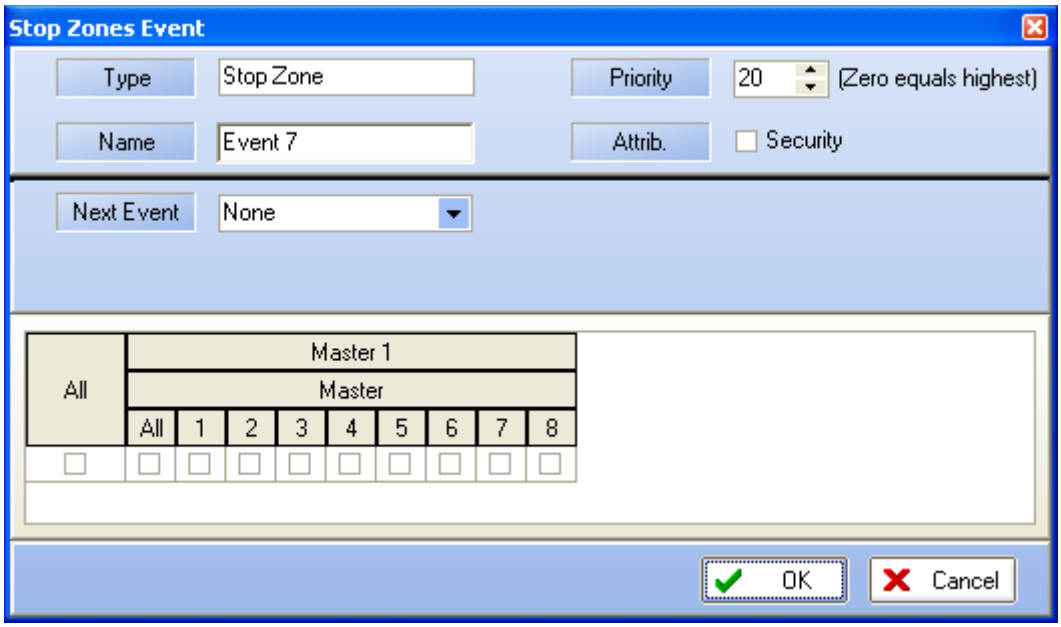
- **Attrib:** here you can choose between security event or not. See Common Option to learn more about the security option.

- **Next Event:** you can specify an event that will be started as soon as this event is finished.

- **Stop Event:** here you can select from the existing event list, the event to be stopped.

9.23.3.5. Stop Zone

The Stop Zones event can interupt every paging, music events in pre-defined zone(s).



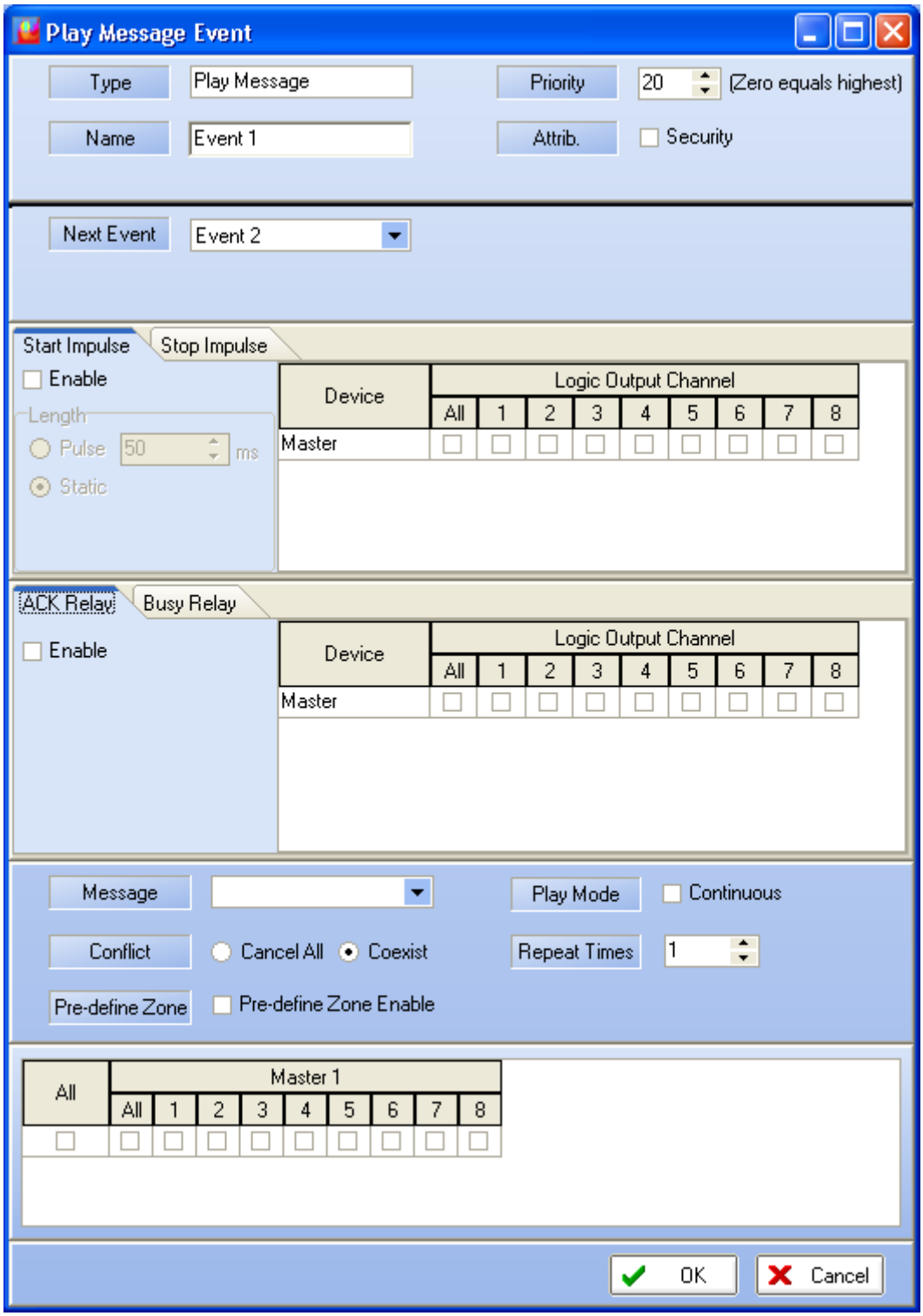
- **Type:** displays the type of event that is created, in this case Load Preset.
- **Name:** here you can specify a name for the event created.
- **Priority:** here you can choose a priority level for this event.
- **Attrib:** here you can choose between security event or not. See Common Option to learn more about the security option.

- **Next Event:** you can specify an event that will be started as soon as this event is finished.

- **Zone Selection:** here you can choose in which zones lower priority events will be interrupted.

9.23.3.6. Play Message

Play message allows starting a message in pre-defined zones after a trigger or starting a message in zones manually selected. The Play Message event offers the possibility to set an output relay activation. For more information about use of output relay, please read this.



- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not and if it is an evacuation event or not. See Common Option to learn more about the security option

---

- **Next Event:** here you can select the event to start after the current one is finished

---

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** you can specify here an logic output channel that will be closed when the event is active..
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is active in one of the pre-define zones.

To learn more about output relay, please read the How To Use Output Relay.

- **Message:** by using the drop down menu, you can select, in the list of stored message, a message to assign to the event
- **Play Mode:** by ticking continuous, the message will be played until a trigger happen. You can also specifiy a number of repeat time.
- **Conflict:** you can choose between Cancel All or Coexist
- **Repeat Time:** if continuous not ticked, you can choose a number of time this event will be repeated
- **Pre-define Zone:** here you can specify the pre-define zone(s) where the message will be played

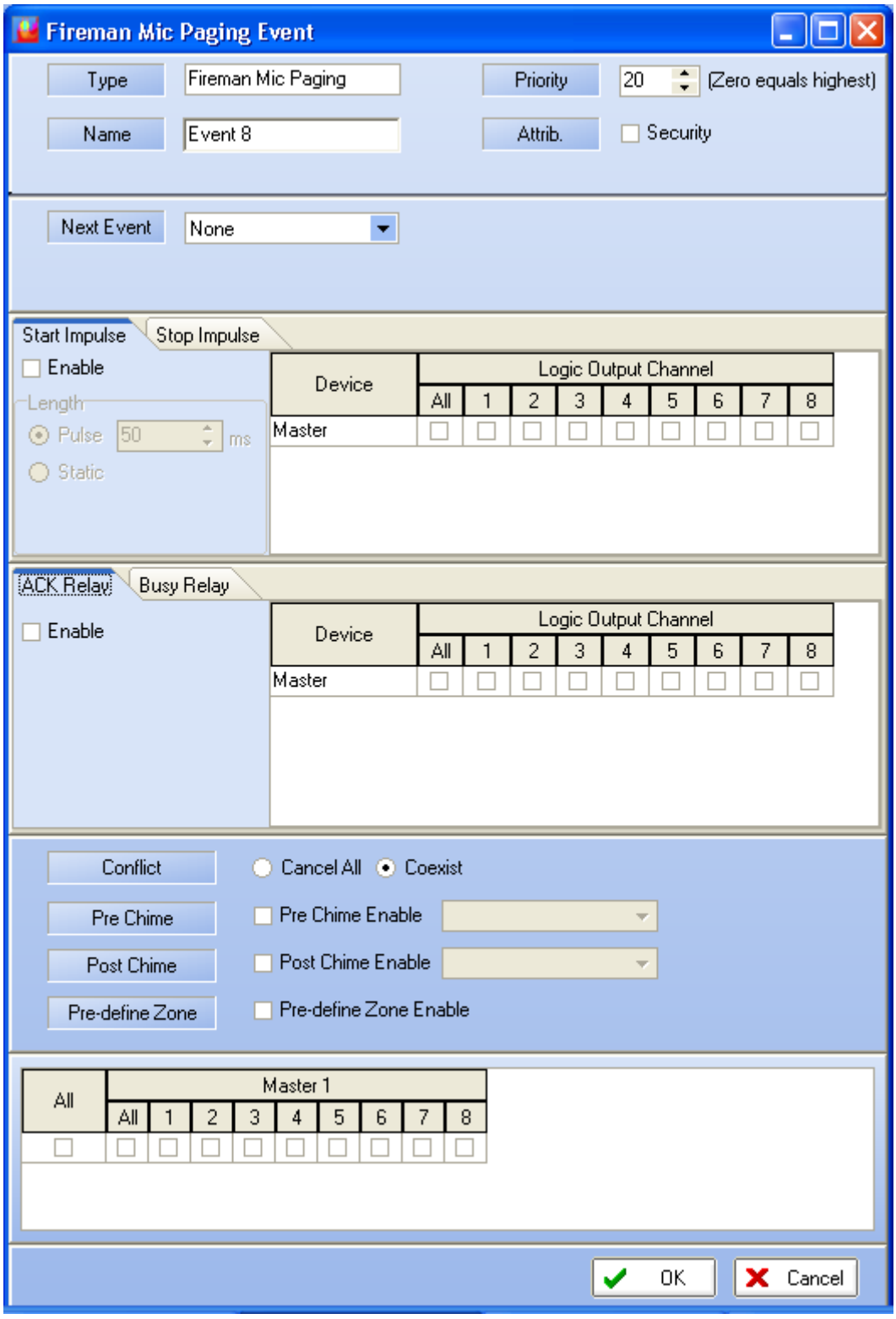
---

- **Zone Selection:** here you can specify the zone(s) where the call will be played

Note: Messages can only be seen if they are a part of the configuration. Reading the message memory of the DIVA does not put messages in the configuration. You'll have to reverse the messages in order to be able to use them in the configuration.

9.23.3.7. Fireman Mic Paging

A Fireman Mic Paging event can be declared in order to be used with any type of trigger.



- **Type:** display the type of event you are creating or modifying.
- **Name:** here you can specify a name for the event created. Default is Event X.
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest.
- **Attrib:** here you can specify if this event is a security one or not and if it is an evacuation event or not. See Common Option to learn more about the security option.

- **Next Event:** here you can select the event to start after the current one is finished.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** you can specify here an logic output channel that will be closed when the event is active..
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is active in one of the pre-define zones.

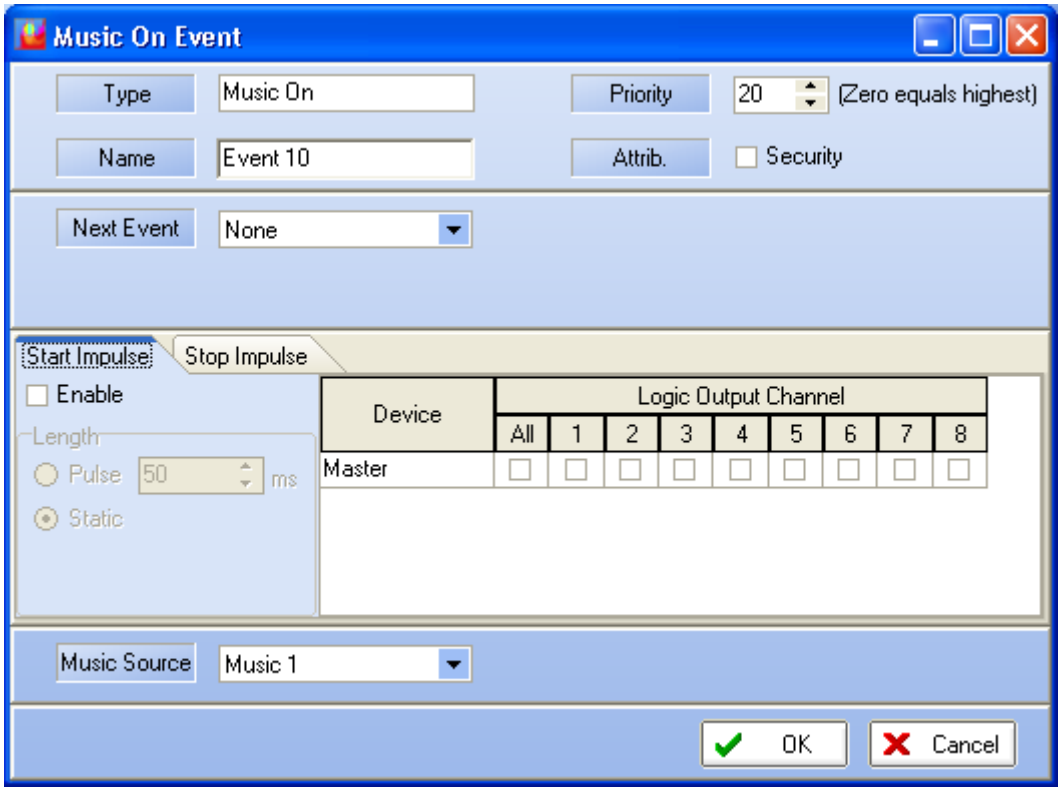
To learn more about output relay, please read the How To Use Output Relay.

- **Conflict:** you can choose between Cancel All or Coexist.
- **Pre Chime:** Before a call you can add a chime message. Here, if Pre Chime Enable is selected, you can select which message will be used as pre chime.
- **Post Chime:** After a call you can add a chime message. Here, if Post Chime Enable is selected, you can select which message will be used as post chime
- **Pre-define Zone:** if ticked, you can choose pre defined zone with the zone selector.

- **Zone Selection:** here you can specify the zone(s) where the call will be played

9.23.3.8. Music ON

The Music On event allows to start music source 1 or 2 with any type of trigger. Music sources will start playing in pre-defined zone(s) chosen in the Music Event window.



- **Type:** display the type of event you are creating or modifying.
- **Name:** here you can specify a name for the event created. Default is Event X.
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest.

- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option.

- **Next Event:** here you can select the event to start after the current one is finished.

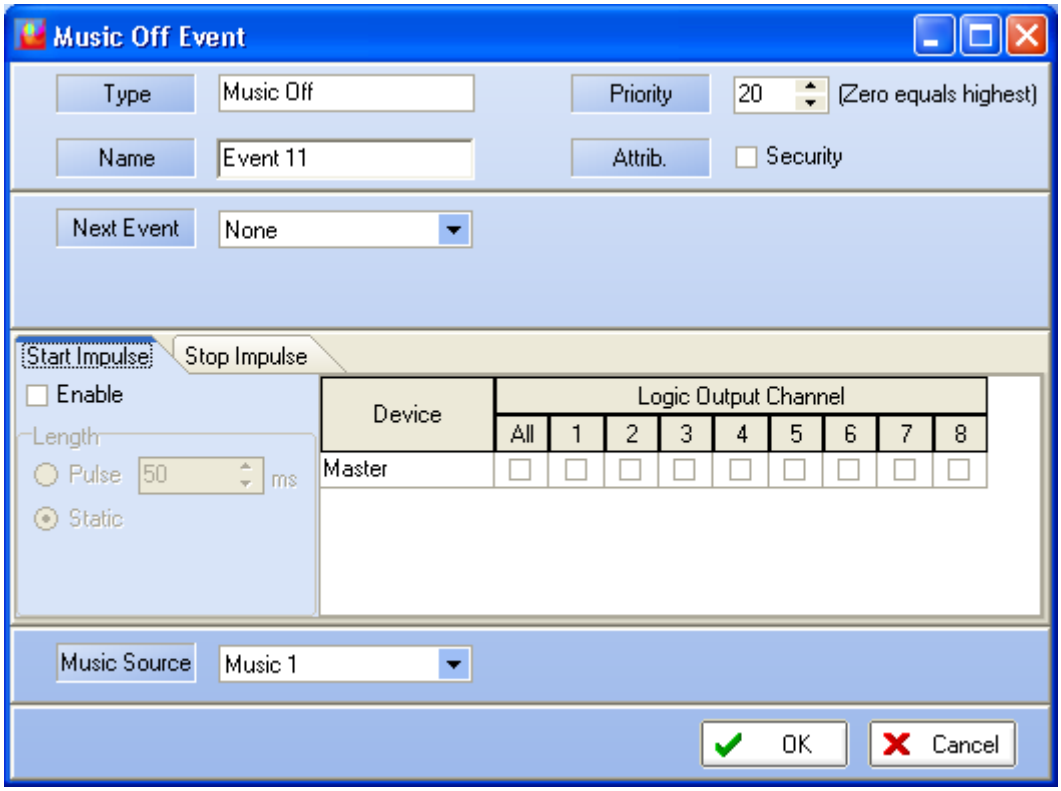
- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.

To learn more about output relay, please read the How To Use Output Relay.

- **Music Source:** here you can choose the music source you want to switch on.

9.23.3.9. Music OFF

The Music Off event allows to stop music source 1 or 2 with any type of trigger. Music sources will stop playing in pre-defined zone(s) chosen in the Music Event window.



- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option

---

- **Next Event:** here you can select the event to start after the current one is finished

---

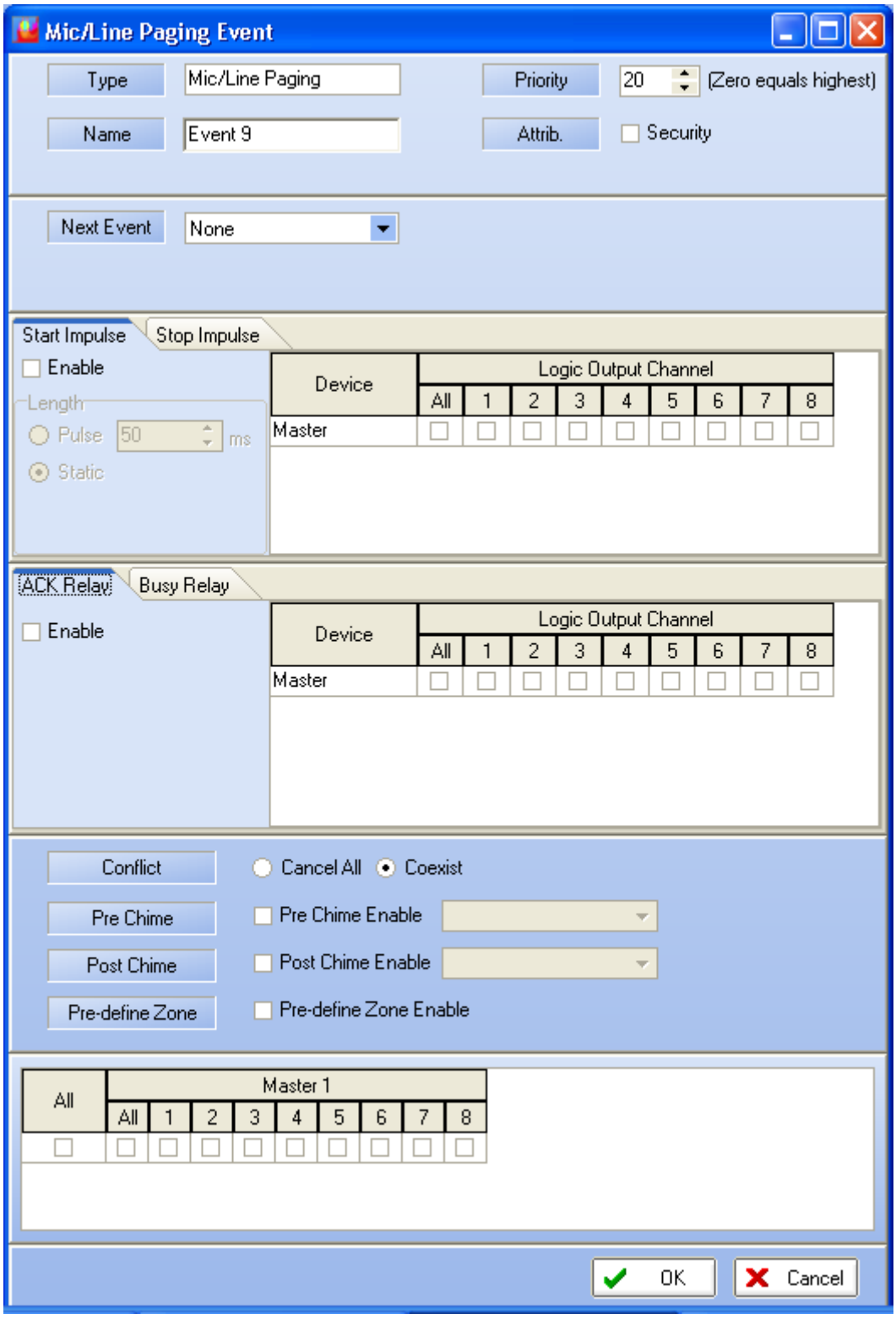
- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.

To learn more about output relay, please read the How To Use Output Relay.

- **Music Source:** here you can choose the music source you want to switch off

9.23.3.10. Mic/Line Paging

A Mic/Line Paging event can be declared in order to be used with any type of trigger.



- **Type:** display the type of event you are creating or modifying.
- **Name:** here you can specify a name for the event created. Default is Event X.
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest.
- **Attrib:** here you can specify if this event is a security one or not and if it is an evacuation event or not. See Common Option to learn more about the security option.

- **Next Event:** here you can select the event to start after the current one is finished.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** you can specify here an logic output channel that will be closed when the event is active..
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is active in one of the pre-define zones.

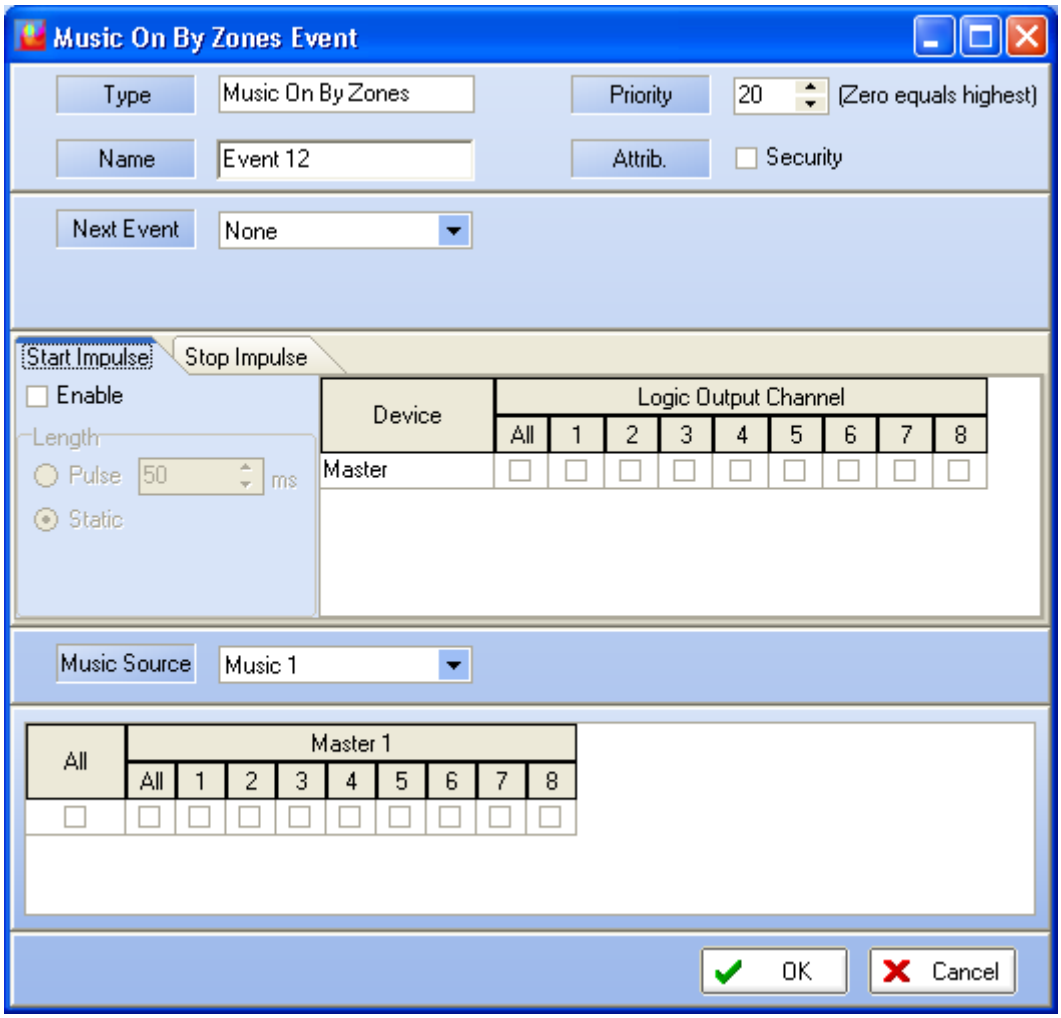
To learn more about output relay, please read the How To Use Output Relay.

- **Conflict:** you can choose between Cancel All or Coexist.
- **Pre Chime:** Before a call you can add a chime message. Here, if Pre Chime Enable is selected, you can select which message will be used as pre chime.
- **Post Chime:** After a call you can add a chime message. Here, if Post Chime Enable is selected, you can select which message will be used as post chime
- **Pre-define Zone:** if ticked, you can choose pre defined zone with the zone selector.

- **Zone Selection:** here you can specify the zone(s) where the call will be played

9.23.3.11. Music ON By Zones

The Music On By Zones event allows to start music source 1 or 2 with any type of trigger in pre-defined zone(s).



- **Type:** display the type of event you are creating or modifying.
- **Name:** here you can specify a name for the event created. Default is Event X.
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest.
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option.

- **Next Event:** here you can select the event to start after the current one is finished.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.

To learn more about output relay, please read the How To Use Output Relay.

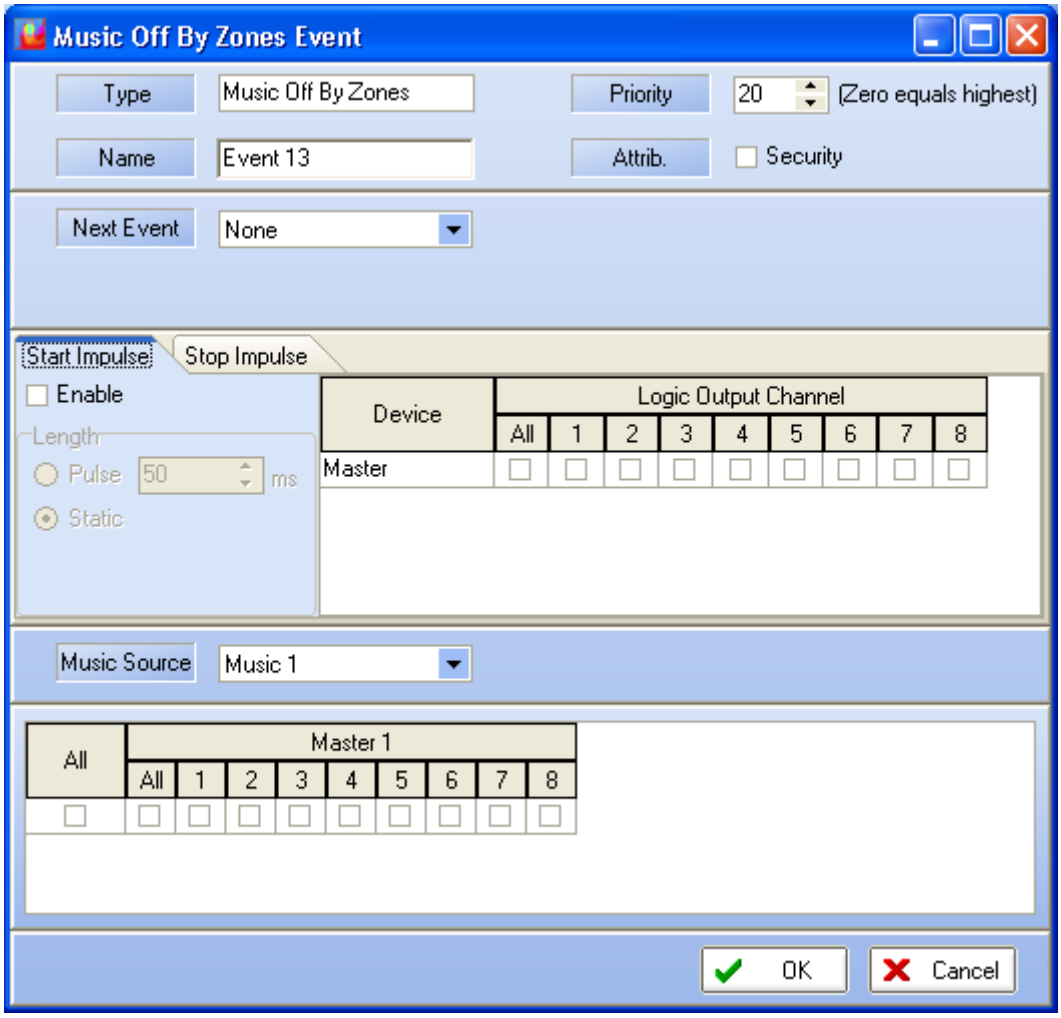
.

- **Music Source:** here you can choose the music source you want to switch on.

- **Zone Selection:** here you can specify the zone(s) where the music will be activated.

9.23.3.12. Music OFF By Zones

The Music Off By Zones event allows to stop music source 1 or 2 with any type of trigger in pre-defined zone(s).



- **Type:** display the type of event you are creating or modifying.
- **Name:** here you can specify a name for the event created. Default is Event X.
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest.
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option.

- **Next Event:** here you can select the event to start after the current one is finished.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.

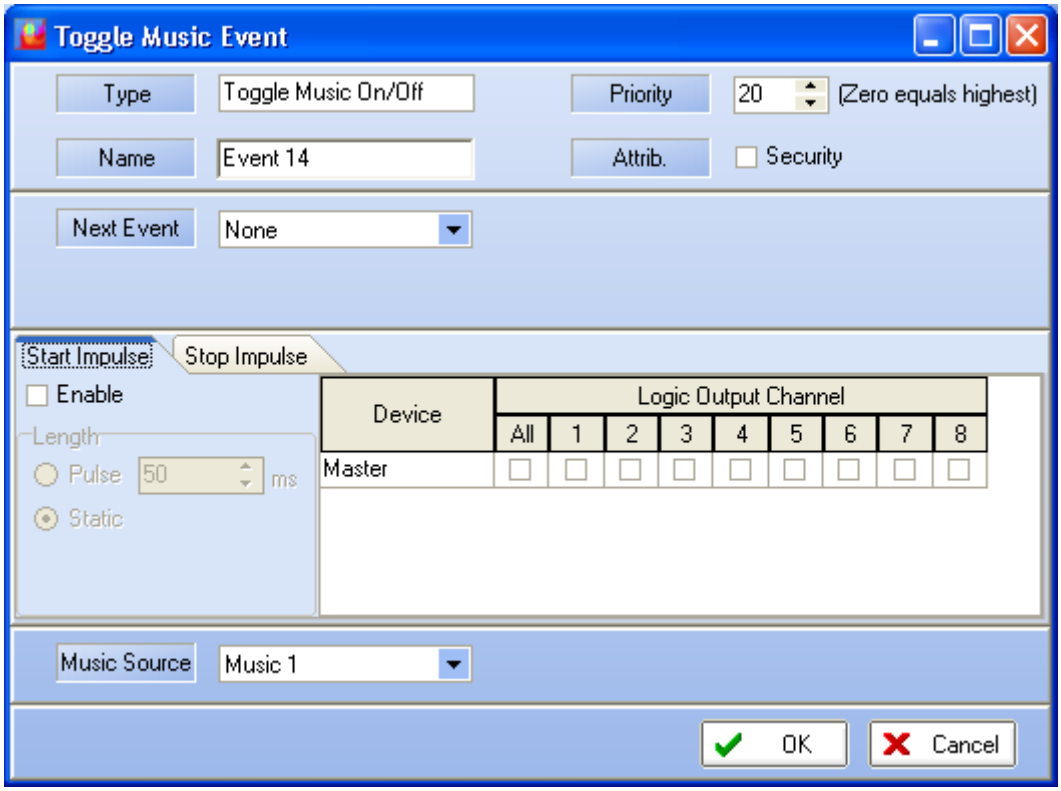
To learn more about output relay, please read the How To Use Output Relay.

- **Music Source:** here you can choose the music source you want to switch off.

- **Zone Selection:** here you can specify the zone(s) where the music will stop playing.

9.23.3.13. Toggle Music ON/OFF

The Toggle Music On/Off event have been created to turn music on or off with one same trigger. As example, using a contact, one closing will switch on music, one more closing will switch off music.



- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option

---

- **Next Event:** here you can select the event to start after the current one is finished.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.

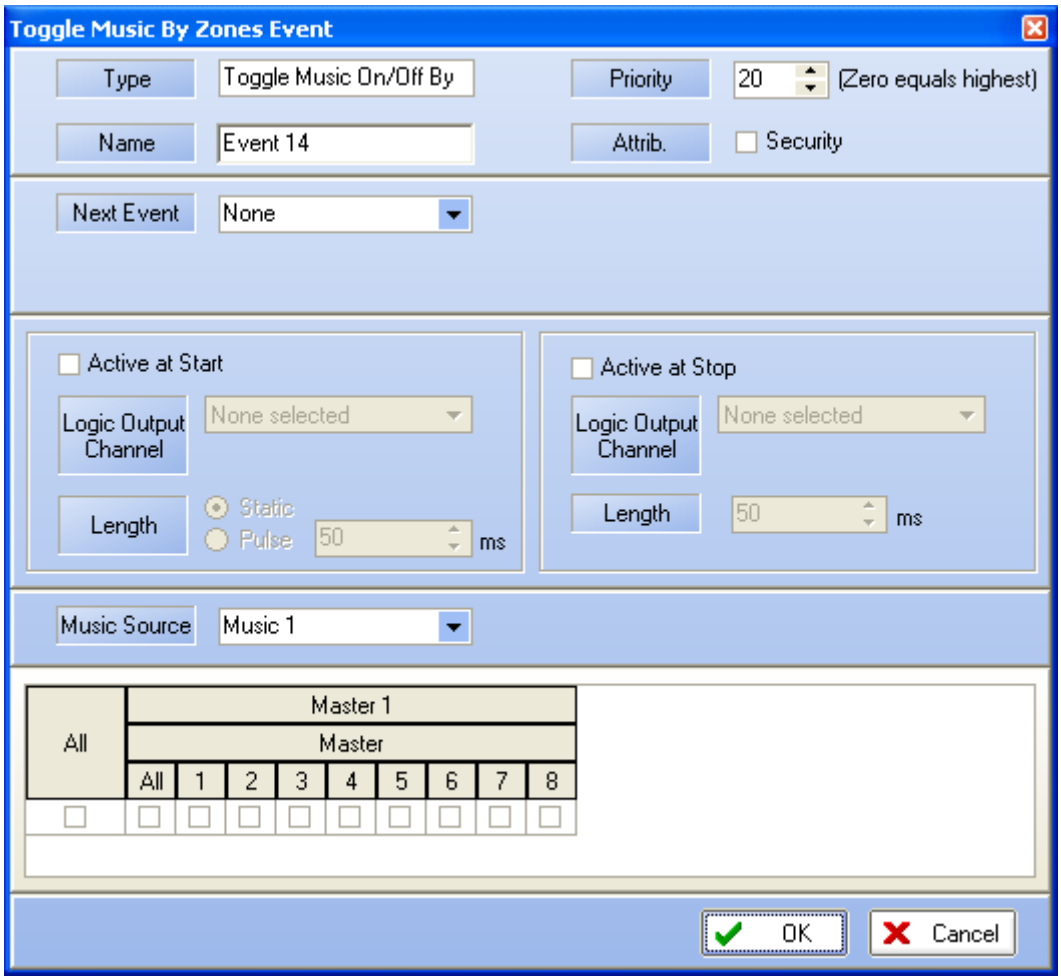
To learn more about output relay, please read the How To Use Output Relay.

- **Music Source:** here you can choose the music source you want to switch on/off

9.23.3.14. Toggle Music ON/OFF By Zones

The Toggle Music On/Off By Zone event have been created to turn music on or off with one same trigger in some zones. As example, using a contact, one closing will switch on music one more closing will switch off music in pre-

defined zone(s).



- **Type:** display the type of event you are creating or modifying.
- **Name:** here you can specify a name for the event created. Default is Event X.
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest.
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option.

- **Next Event:** here you can select the event to start after the current one is finished.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.

To learn more about output relay, please read the How To Use Output Relay.

- **Music Source:** here you can choose the music source you want to switch on/off by zone.
- **Zone Selection:** here you can specify the zone(s) where the music will switch On/Off by zone.

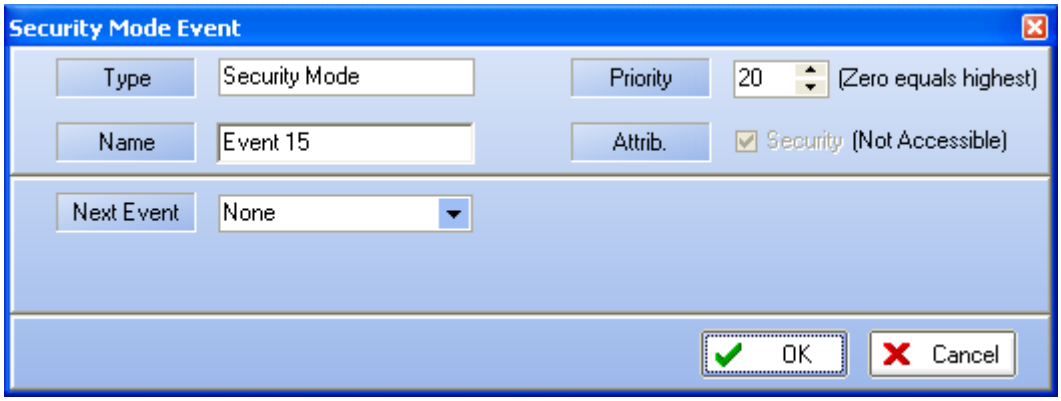
9.23.3.15. Security Mode

In order to be compliant to standard and to save energy, DIVA has two working mode: Normal and Security.

Normal: DIVA is supplied by the electricity network. In normal mode, any type of event could be started

Security: DIVA is supplied by backup batteries after a power supply failure. In security mode, only security event could be started, Music is automatically deactivated. The purpose of the security mode is to save energy and to increase DIVA working state under batteries.

In order to fit the event philosophy, you can force DIVA to enter the security mode with the Security Mode event. Be careful when using such an event, all non security event will be unavailable.



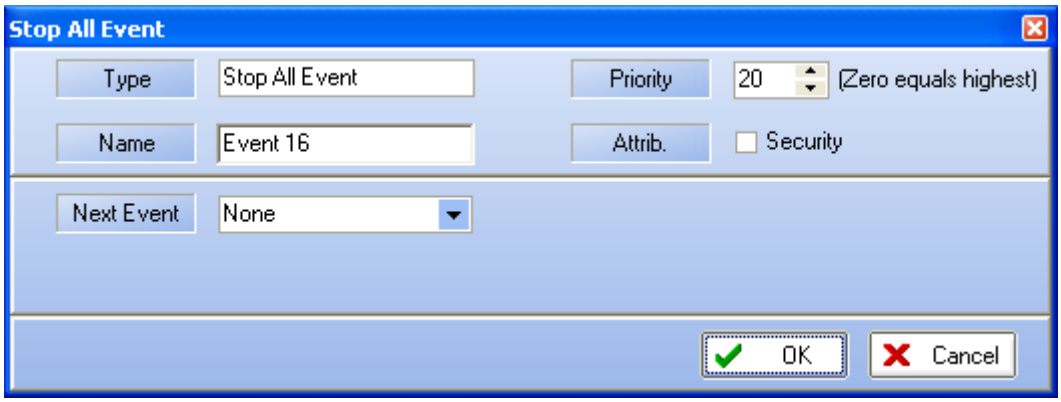
- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** not accessible

- **Next Event:** here you can select the event to start after the current one is finished

Note: In order to use a Fault Input contact to trigger the security mode, the event must be link to the corresponding fault input. To do so, please refer to the "How To Use Logic Inputs" chapter.

9.23.3.16. Stop All Events

This event has been design to stop all events that are currently running in the system with one trigger action.



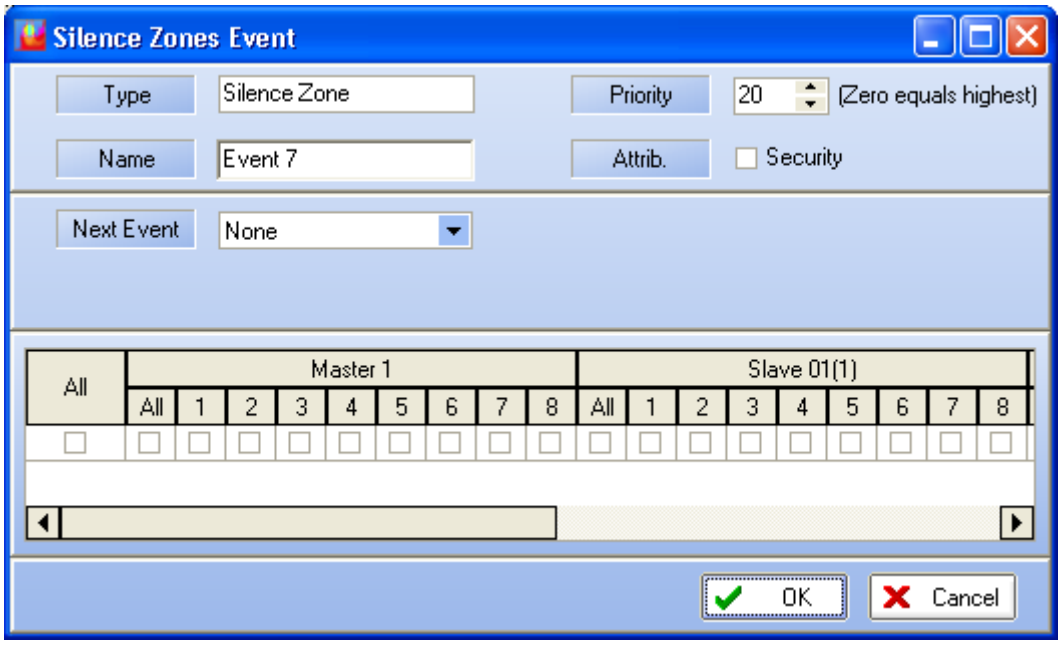
- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option

---

- **Next Event:** here you can select the event to start after the current one is finished

9.23.3.17. Silence Zone Event

The "Silence Zones Event" allow user to mute the audio in zone(s) without affecting the zone state (evacuation or alert/page). This is a common way for firemen to stop the evacuation message when a building is empty.



- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not. See Common Option to learn more about the security option

---

- **Next Event:** here you can select the event to start after the current one is finished

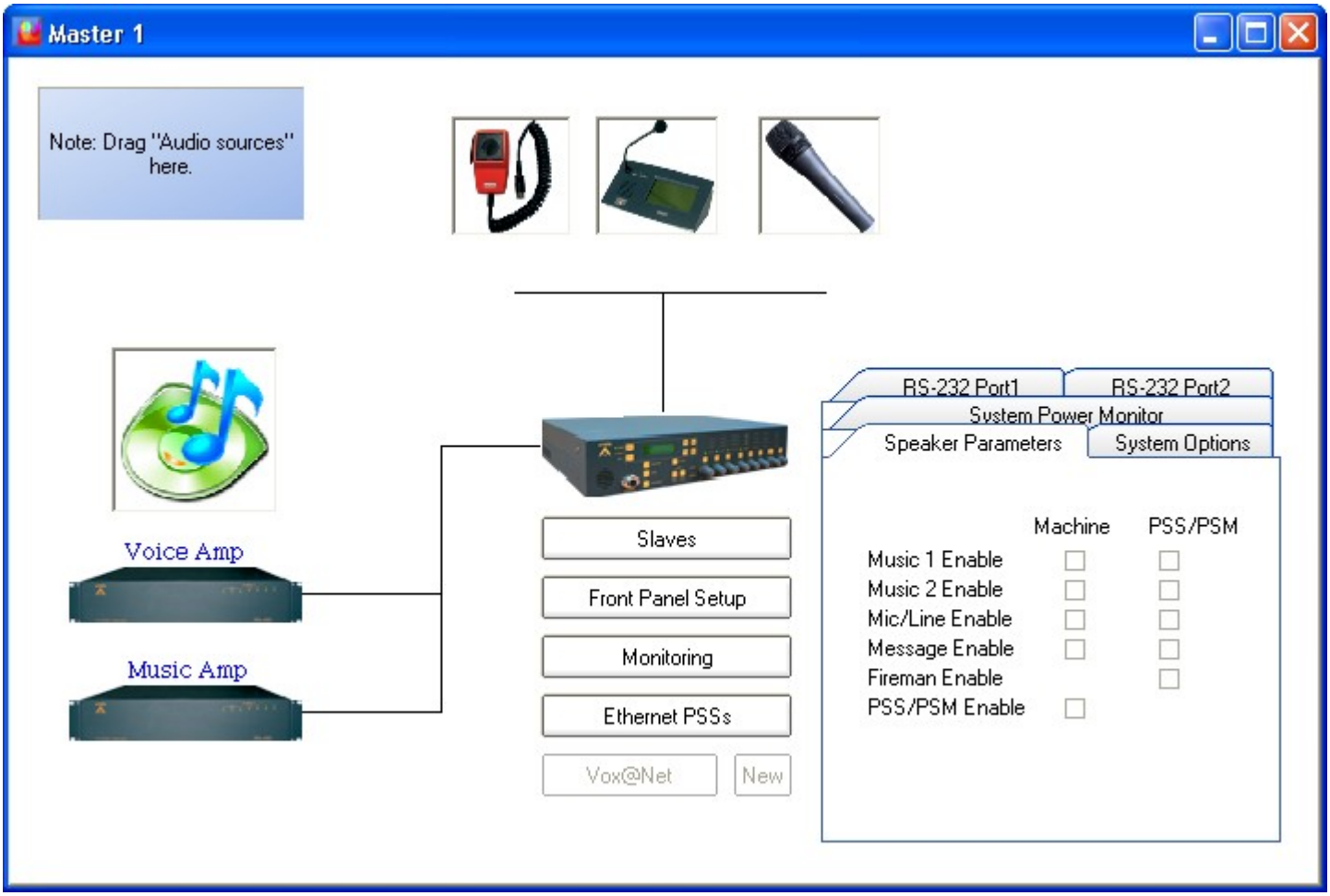
---

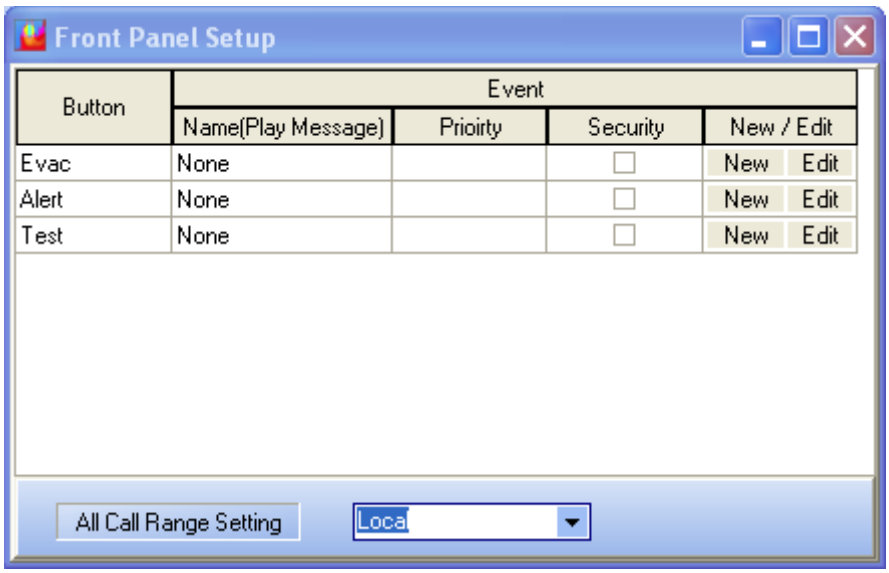
- **Zone Selection:** here you can choose in which zones audio will be muted.

9.24. Set up Front Panel Message

There are three message button on the front panel: Evacuation, Alarm and Test. In order to assign play message events to those buttons, follow the next steps.

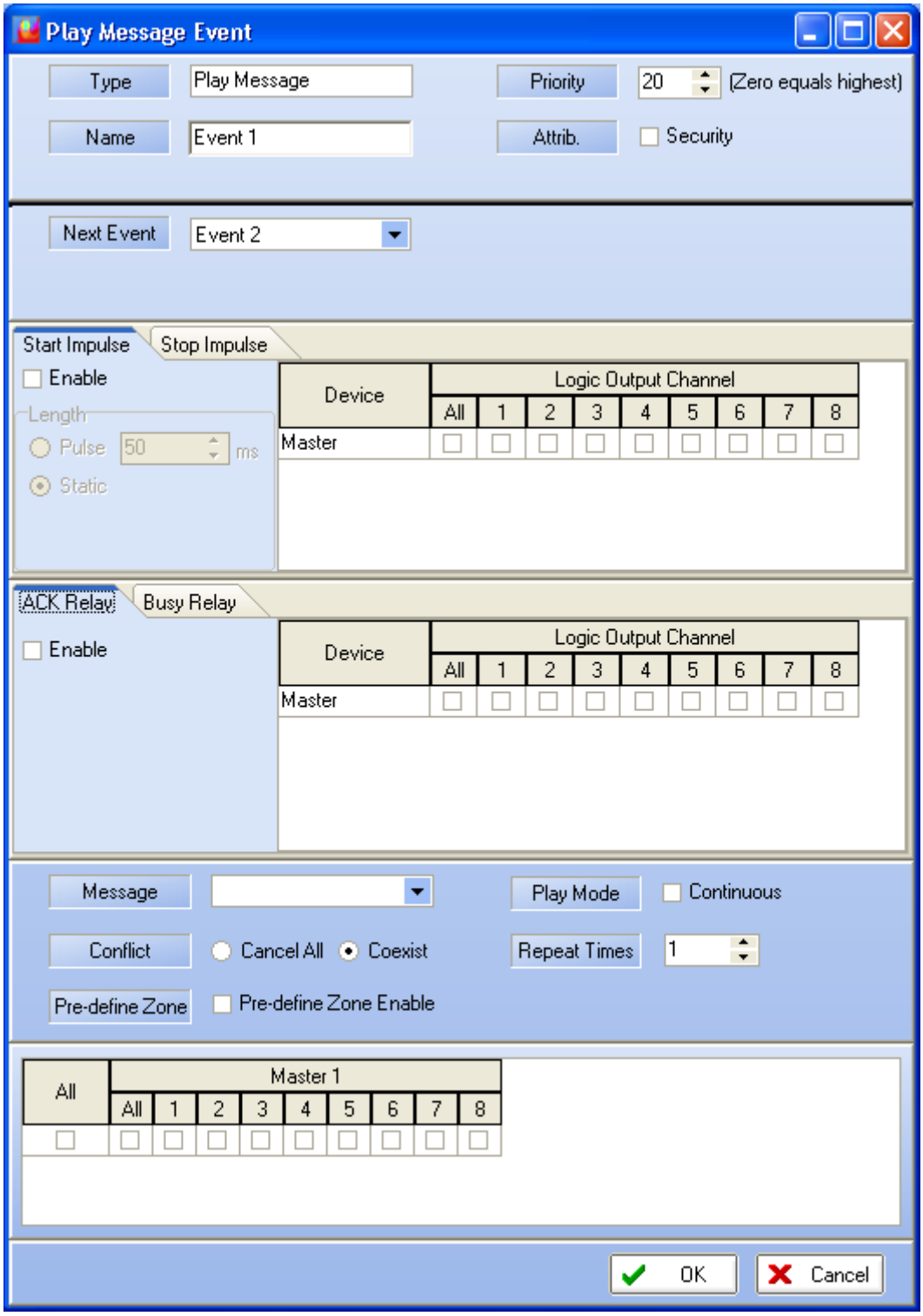
Access the front panel setup window by clicking on the Front Panel Setup button in the master page, see below.





At the left of the window, you will find the button name. You can set an event for only one button, two or all.

- In the corresponding line, click on New to assign a new play message event to the button or choose an existing one using the drop-down menu accessible by clicking in the Name cell. Event created is by default named Event X.
- Click the Edit button to enter the play message event window, see below.



For all the settings available, please refer to the following list:

- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X

- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not and if it is an evacuation event or not. See Common Option to learn more about the security option

---

- **Next Event:** here you can select the event to start after the current one is finished

---

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** here you can set the closing of a Logic Output Channel relay as soon as zones where an event has to be played are freed from higher priority events.
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is playing in common zones.

To learn more about output relay, please read the How To Use Output Relay.

- **Message:** by using the drop down menu, you can select, in the list of stored message, a message to assign to the event
- **Play Mode:** by ticking continuous, the message will be played until a trigger happen. You can also specifiy a number of repeat time.
- **Conflict:** you can choose between Cancel All or Coexist
- **Repeat Time:** if continuous not ticked, you can choose a number of time this event will be repeated
- **Pre-define Zone:** here you can specify the pre-define zone(s) where the message will be played

---

- **Zone Selection:** here you can specify the zone(s) where the call will be played

---

- **OK:** will accept the current setting and close the window
- **Cancel:** will annulled the current settings and close the window

Note: Messages can only be seen if they are a part of the configuration. Reading the message memory of the DIVA does not put messages in the configuration. You'll have to reverse the messages in order to be able to use them in the configuration.

9.25. Use a Fireman Microphone

In order to use the fireman microphone, first drag and drop the fireman microphone from the Design Component Section to the Master window. Double click the fireman microphone icon to enter the Fireman Microphone window (see below).

Here is a list of controls and indicator in the fireman microphone window:

- **Advance Setting:** by clicking the Edit button you will enter the fireman microphone event setting window. Please see below.

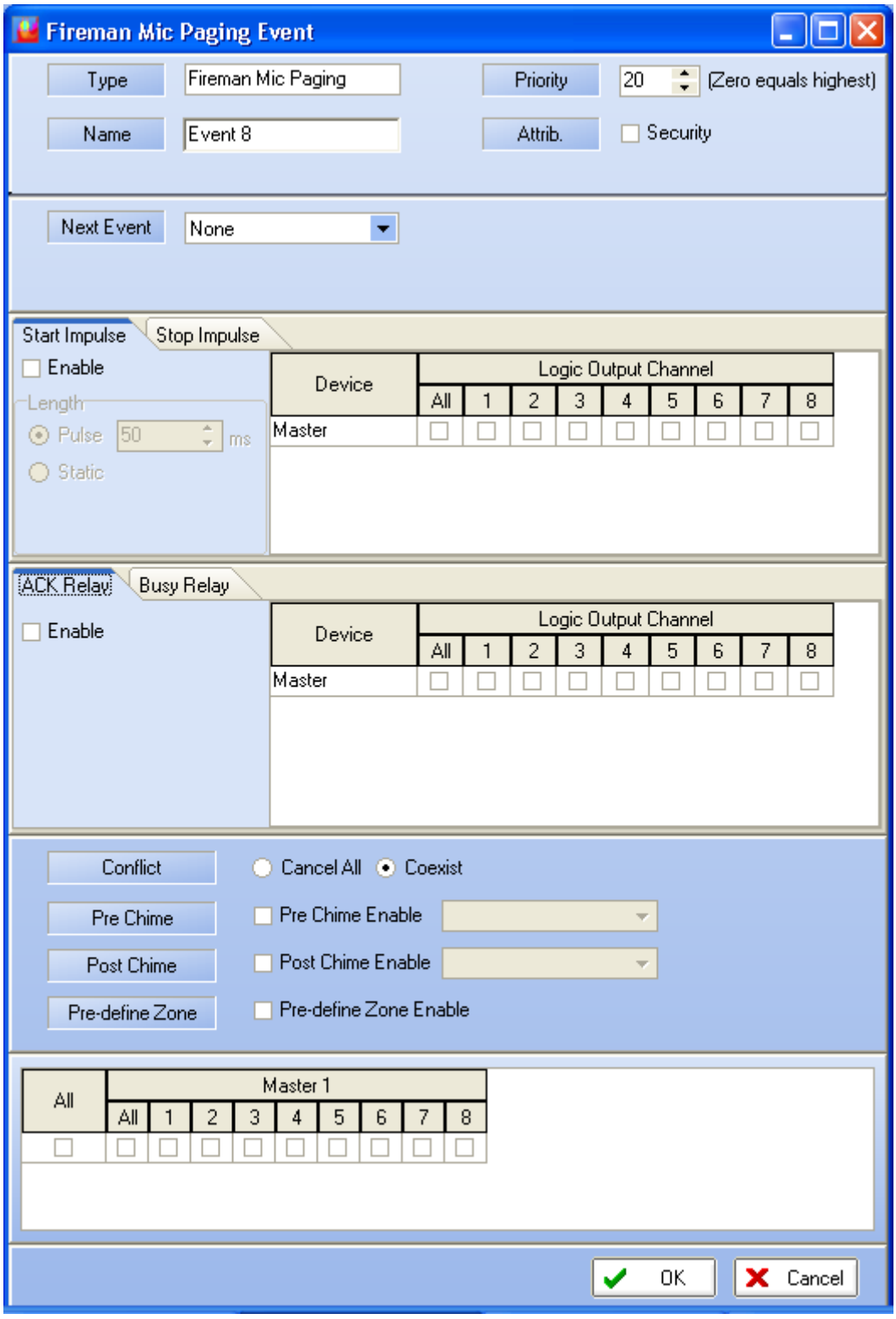
Note: the fireman microphone default paging mode is always push to talk. By default, the priority of the fireman microphone is set to zero, the highest priority available, and the security and evacuation options are ticked. The fireman microphone have been designed to be an emergency paging element, so be careful when changing priority and security settings.

- **Security:** by ticking security, you will allow user to make a call when DIVA is in security mode
- **Evacuation:** ticking this option will make the fireman microphone an evacuation source

---

- **Level (dB):** when connected to DIVA, you can adjust, real time mode, the level of the fireman microphone
- **Volume (dB):** indicates the current output level of the fireman microphone
- **Clip Threshold (dB):** allows to set the threshold point for the Clip indicator
- **Level Overflow:** this is a LED indicators that light up when a too high level is detected on the fireman microphone
- **Clip:** indicates when the signal is clipping

- **Zone Release Time:** here you can set a time for which the manually zone selection is kept in memory. Since this time has passed, the next fireman microphone called will be routed in the pre-define zone
- **Push to talk:** with this option ticked, you will need to keep the microphone button pressed in order to be able to talk
- **Lock To Talk:** with this option ticked, one pressure on the microphone button will start the call and one more pressure will stop the call. For safe operations, you can set a time after which the call is automatically stopped
- **Enable Release Time:** ticking this option will stop the fireman microphone call after the amount of time defined. This is used in order to avoid deactivation issue.



The Fireman Microphone Paging Event window (see above) is divided in several section where can set:

- **Priority:** you can specify a priority level between 20 and zero. The highest priority level is 0 when 20 is the lowest
- **Security:** by ticking security, you will allow user to make a call when DIVA is in security mode
- **Evacuation:** ticking this option will make the fireman microphone an evacuation source

Note: the security and evacuation options are automatically passed to the event accessible in the Advance Setting

- The next portion of the window is dedicated to the output relay management. In order to find out to use please see "How to Use Output Relay".

- **Conflict:** here you can choose how to manage priority conflict. “Cancel All” consists of cancelling all the messages or events, with a lower priority, that are currently playing in the selected zone. “Coexist” permit to momentarily disable the current message or event and to retrieve it as soon as the one with a higher priority has finished.
- **Pre-Chime:** the pre-chime option allows to play a chime message before each call. You can choose the chime message using the drop-down menu.
- **Pre-define Zone:** by ticking this option you will be able to select pre-define zone in which the call will be made. Pre-defining zones don't disable the front-panel zones selector. As soon as a call in non pre-defined zone is finished, the next call will be automatically rerouted in the pre-defined zone after the amount of time set in the fireman microphone main window.

- By clicking Ok you will validate your settings, Cancel will annulled the current settings.

9.26. Use Music Source

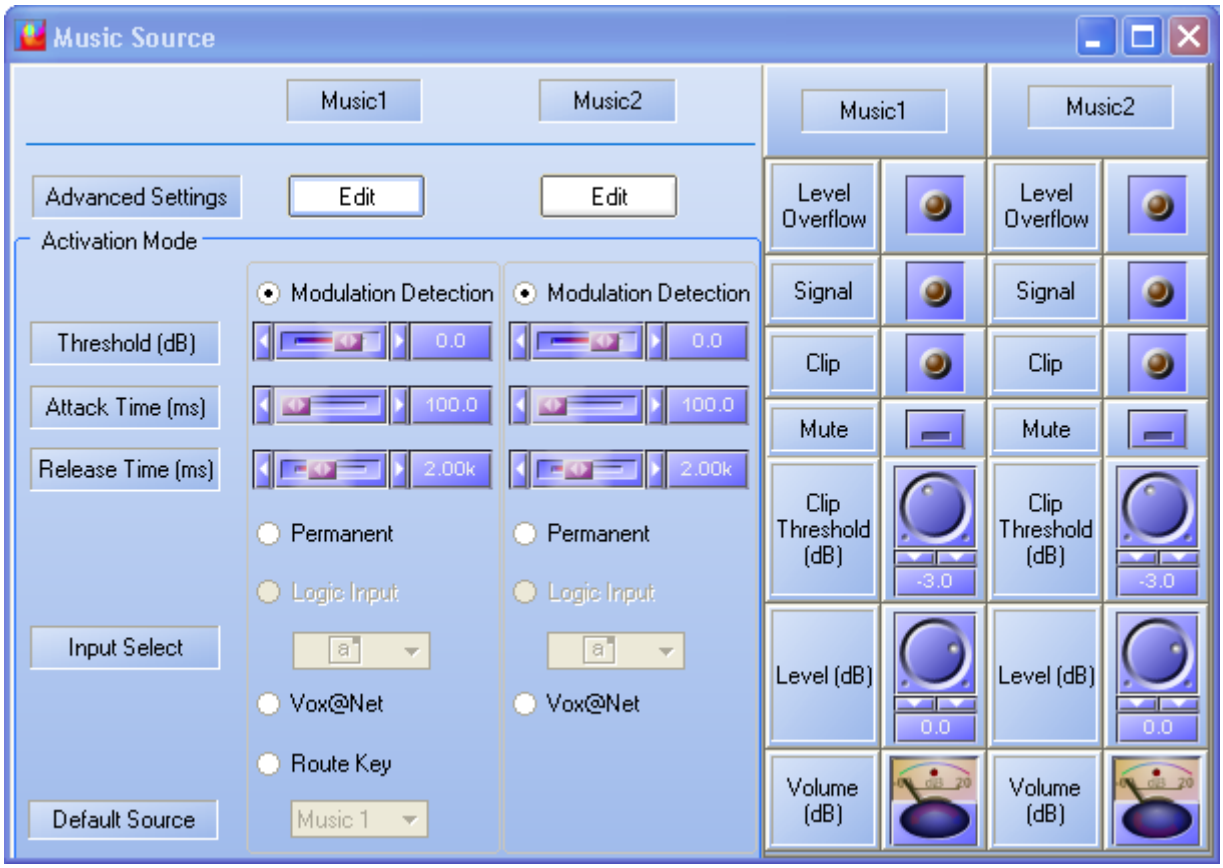
In order to use music sources, first drag and drop music source from the Design Component Section to the Master window. Double-click the music source Icon to enter the Music Source window, see below.

Music sources routing can be managed from front panel, from PSS and from logic input. You can also use real-time control and indicators in order to adjust the music sources' level, to mute sources independently and to check music sources status.

See the following chapter to learn more:

- Use Music Source From Front Panel
- With Modulation Detection
- In permanent Mode
- Use Music Source From PSS
- Use Music Source From Logic Input
- Software Control

The use of music sources in combination with Vox@Net is discussed in the How to Put DIVA in Vox@Net chapter, please refer to it for more information.



The Music Source main window allows user to select in which mode the music sources are used. You can find:

- **Modulation Detection**

The modulation detection mode is like the VOX mode. It allows you to activate a source as soon as a certain amount of signal is detected.

- **Permanent**

Permanent mode allows to set up both music sources' routing. It will deactivate all the front panel music controls

- **Logic Input**

Using music from logic input allows user to manage external trigger to control the routing of music sources.

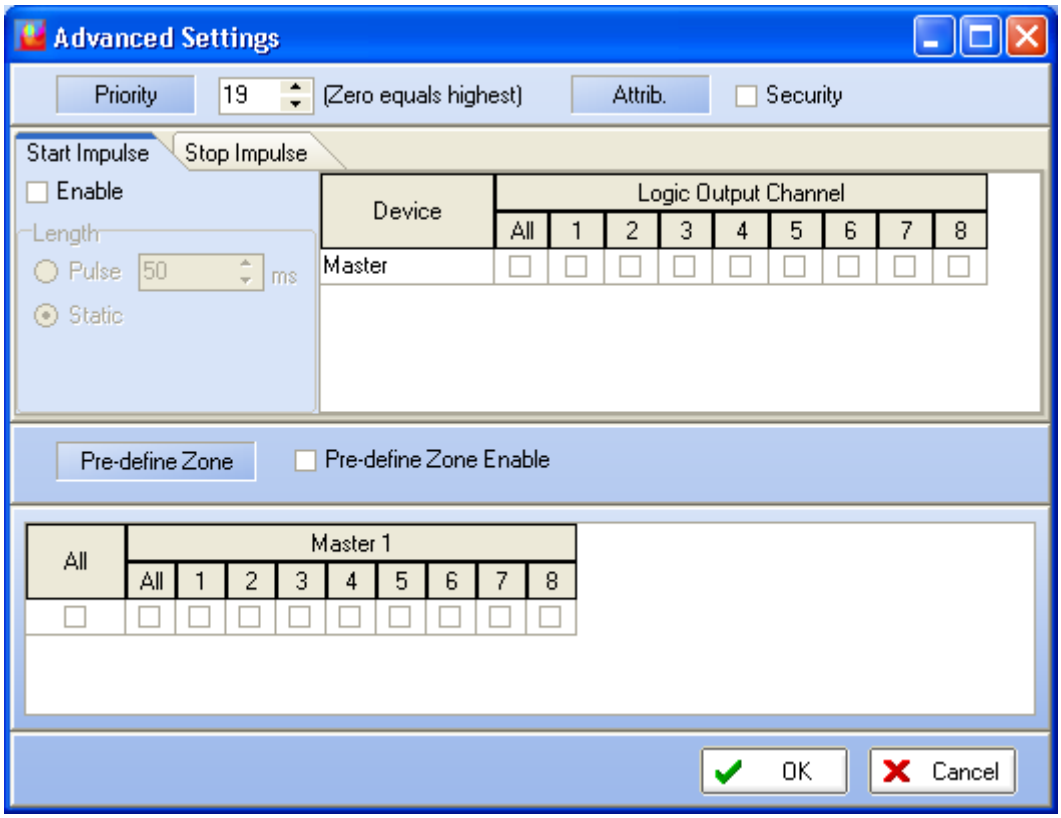
- **Vox@Net:**

Please refer to the How to Put DIVA in Vox@Net chapter.

- **Route Key**

The route key mode will activate all the music button on the front panel and will offer the possibility to route music from the PSS microphone console.

For all those different mode, you will have to set up the music sources setting by clicking the Edit button for both sources. When clicking on the Edit button for music source 1 or 2, you will enter the music source Advanced setting, see below. **Note: for music used with logic inputs, the music sources settings have to be made with the Music Events.**



- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest. **Note: be carful when setting priority for both sources, conflict may appeared if both sources have the same priority level.**
- **Attrib:** here you can specify if this event is a security one or not. See How to Use Event to learn more about the security option.

- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** you can specify here an logic output channel that will be closed when the event is active.
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is active in one of the pre-define zones.

The output relay part is discussed in the How To Use Output Relay, please read it.

- **Pre-define Zone:** here you can specify in which zone music will be routed. **Note: In Route Key mode, you don't have to pre-define zones as everything is controlled from the front panel. However, you can specify zone in Route Key mode but keep in mind that the routing will only be activated for default music source.**

- **OK:** will accept the current setting and close the window
- **Cancel:** will annulled the current settings and close the window

9.26.1. From Front Panel

On DIVA front panel, you have the possibility to assigned music sources to a zone (or multiple), set up attenuation for each speaker zone (only on music). To manage music source, the music sources should be set in "Route Key"

mode, see How To Use Music Source.

The procedure to assign a music source to a zone is the following:

- Select the music source:
  - Press the SELECT button to go from Source 1 to Source 2.
  - Press SELECT button to go from Source 2 to no selection.
  - Press SELECT button to re-select Source 1.
- Select the zone(s):
  - Press the zone button(s) you want to activate on Master and/or Slaves. The corresponding white selection LED(s) should light(s) up.
- Validate the routing by pressing the ROUTE button.

You can independently route music 1 and 2 in group of zones.

Zone attenuators:

In each master zone, the music level can be attenuated depending your needs. The attenuators offer 6 attenuation positions: 0, -4, -8, -12, -16, -20 dB.

- Adjust the corresponding zone(s) ATTENUATOR KNOBS to the desired attenuation level.

Note: zones that are monitored cannot be attenuated to -20dB without causing monitoring problems. At -20dB attenuation, the accuracy of the impedance circuitry reach its limit.

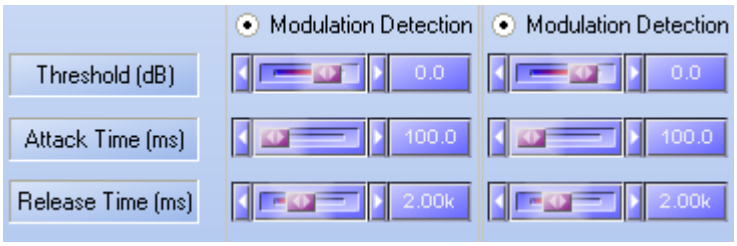
Note: if two music sources are used, keep in mind that attenuator will only have effect on only one of them (music 1). Because the Voice amplifier will be used for music 2, the attenuators won't have any effect on the sound level.

Note: Music attenuator are only available on Master DIVA unit

9.26.2. With Modulation Detection

The modulation detection mode allows to automatically route music sources in case of signal presence. You can set up both source one and two in modulation detection as well as only one source.

The normal use of this option is to set up one source in permanent mode and the other one in modulation detection (example tuner in permanent and CD player in mod.det.). Keep in mind that in that mode, the music front panel buttons are disabled.



In order to use the modulation detection, tick the Modulation Detection option for the source you want to use that way. Once the option selected, you will have access to detection settings:

- **Threshold (dB):**

The threshold setting will set the trigger point for activation of the music source. If the threshold is set to -10 dB, the music source activation will take place when the signal received from that source will be over -10 dB.

- **Attack Time (ms):**

The Attack time can be understood like the amount of time that the signal have to be over the threshold point before music source will be activated. A correct setting of the attack time can avoid inopportune activation of the music source (peak signal activation). The Attack time can be set from 0 ms to 5000 ms.

- **Release Time (ms):**

As opposed to the Attack time, the Release time is the amount of time for which the signal have to stay under the threshold point before deactivation of the music sources. A correct Release Time can avoid inopportune deactivation of the music source (blank in CD). The release time can be set from 0 ms to 5000 ms.

Setting those parameter correctly needs some experience, so be careful and please test it to learn more about the behaviour of this option.

Once your modulation detection parameters are adjusted, you have to edit the advance setting for the music sources, please refer to the Use Music Source general chapter.

9.26.3. In Permanent Mode

In Permanent mode, the music sources are set once and cannot be manage anymore from front panel. However, real-time controls are still useable. To change the sources routing, you will have to change the DIVA configuration.

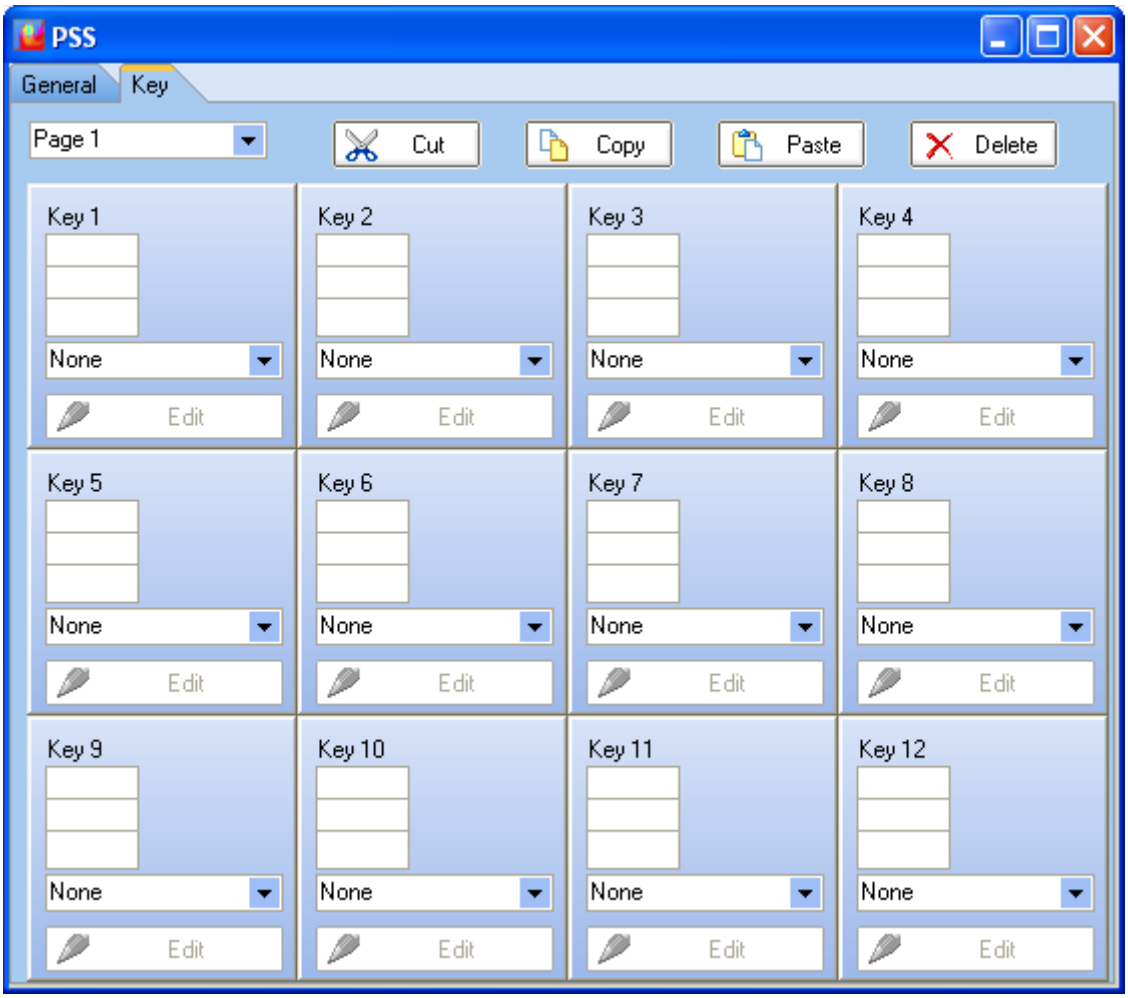
In permanent mode, you only have to Edit the music sources parameters. **Note: be carful when setting priority for both music sources. Same priority for the two music sources can result in conflict.**

9.26.4. From PSS

The PSS microphone is able to operate on music sources. In order to do so, you have to define PSS keys to suit your need. See How To Use PSS Microphone to learn more about the PSS.

Note: Routing music from the PSS can only be operated if the music source mode is Route Key.

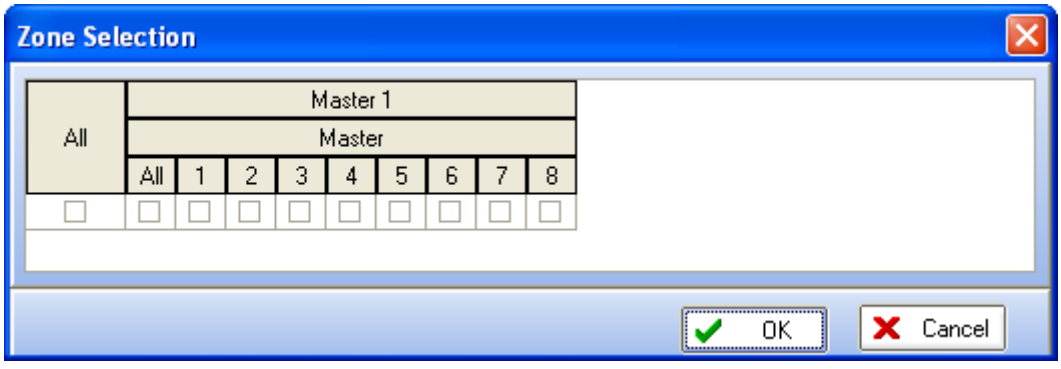
PSS keys, for music operations, can be set to different type using the drop-down menu, see below:



- **Zone Selection**

By creating a "Zone Selection" key, you can make a selection of zones in which music will be routed. **Note: Zone Selection keys are not exclusively for Zone selection for paging, music zone keys are made the same way.**

As soon as you select "Zone Selection", a new "Zone Selection" window will pops up. In this window, choose the zone(s) to associate to the key (see below).



- **Music Source Selection**

When creating a "Music Source Selection" key, you will have to choose between music source 1 and music source 2 with the "Key Setting" pop-up window.

This type of key is used as the front panel select button. You have to select the music source before you can route it to some zones. **Note: this key is not a music source toggle type, you will have to create two music source selection keys in order to be able to route both sources.**

- **Route**

The ROUTE key acts exactly as the front panel route button. It is the way to validate a music source and zone selection.

- **Music Level +/ Music Level -**

From the PSS you can create keys to control the music sources level. The Key created that way is affiliated to one source. So for Controlling both sources level, you will have to create four keys, two for source one and two for source two.

Example 1: procedure to route music source 1 to zone 2, 4 and 6 and music source 2 to zone 3, 5 and 7

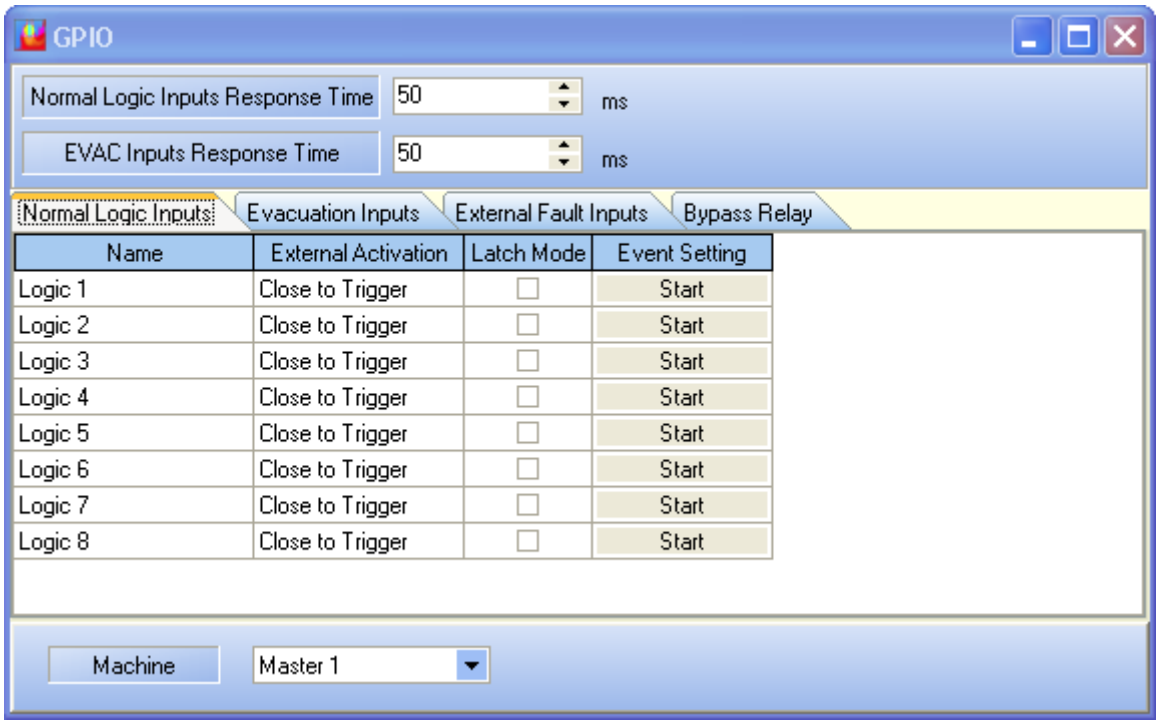
- Create "Zone Selection" key type for zone 2, 3, 4, 5, 6 and 7. Named them accordingly
- Create a "ROUTE" key
- Create two "Music Sources Selection" keys. Named them "Music 1" and "Music 2"
- Store your configuration into DIVA
- To route "Music 1" in zone 2, 4 and 6, press the "Music 1" key then press the zone 2, 4 and 6 and finally press the "ROUTE" key
- To route "Music 1" in zone 3, 5 and 7, press the "Music 2" key then press the zone 3, 5 and 7 and finally press the "ROUTE" key

Example 2: procedure to increase and decrease music source 1 level

- Create a "Music Level +" key and a "Music Level -" key. Named them "Music1 Level+" and "Music1 Level-"
- To increase music source 1 level, simply press the "Music1 level+" key
- To decrease music source 1 level, simply press the "Music1 level-" key

9.26.5. From Logic Input

Like with the PSS, music sources routing can be operate by external trigger, that means with the help of the logic, evacuation or even external fault inputs. In order to access the logic inputs menu, go on menu View -> Logic Inputs. The Logic Inputs page will pops up, see below.

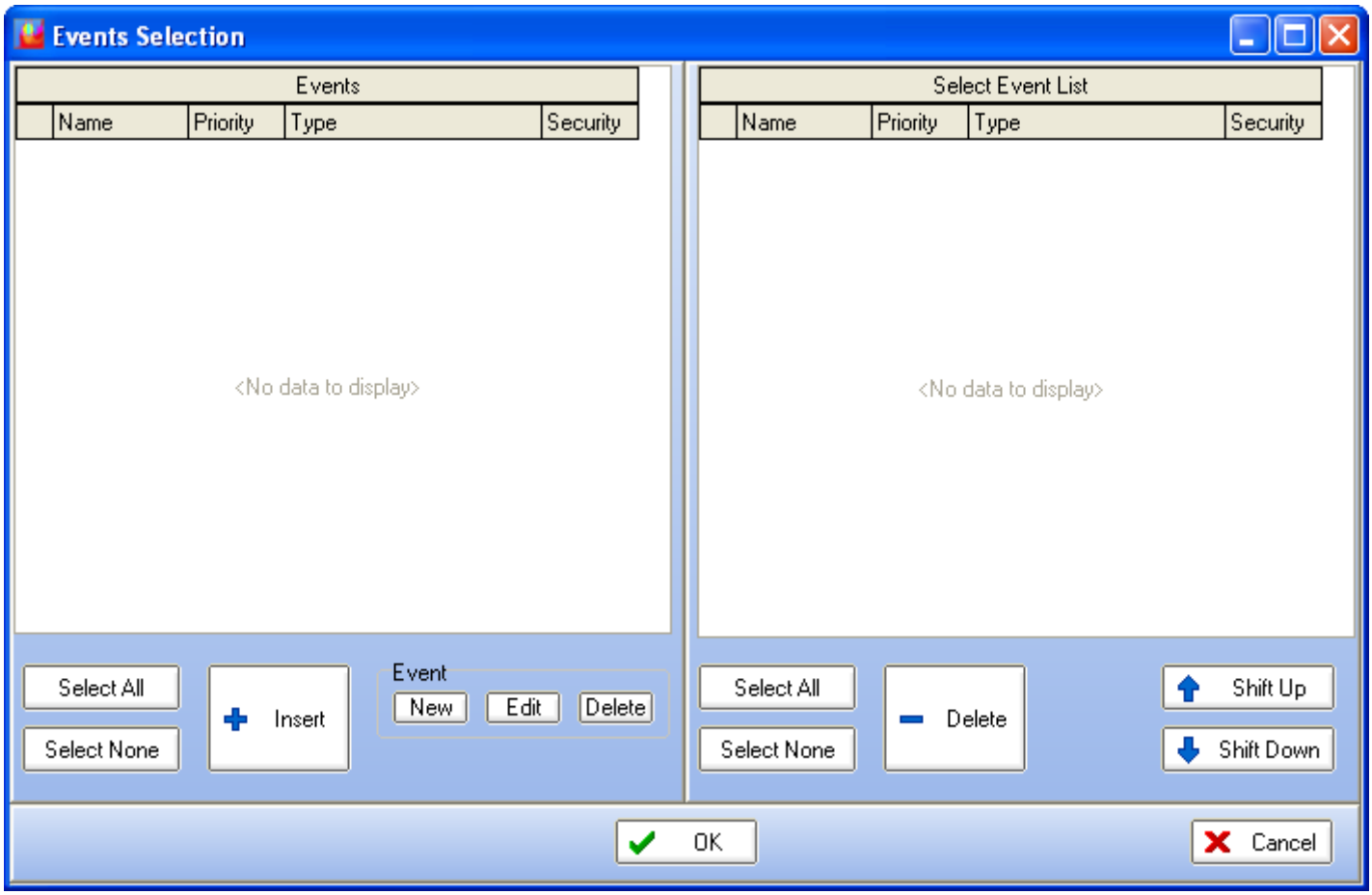


To learn more about the Logic inputs, see How to Use Logic Inputs.

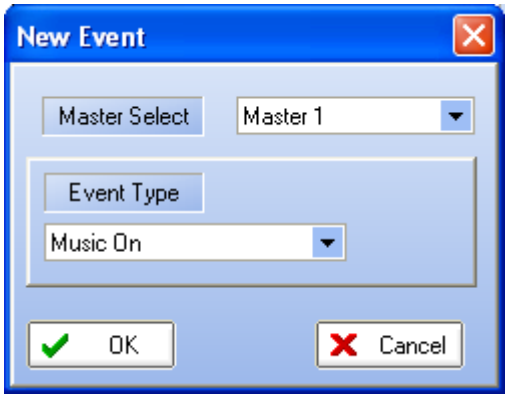
The idea is to use logical trigger to start an event. Event types for operation on music are listed below. You can find more information on those events in the chapter How To Use Events.

- Music On
- Music Off
- Music On By Zones
- Music Off By Zones
- Toggle Music On/Off
- Toggle Music On/Off by Zones

In order to associate a event to a logic input trigger, click on the "Start" button under "Event Setting". The Events Selection window will be open, see below.



On the left side, you will find the list of existing event. To create a new event, simply click on New under Event. As soon as you click on the New button, the software will ask to choose a event's type, see below.

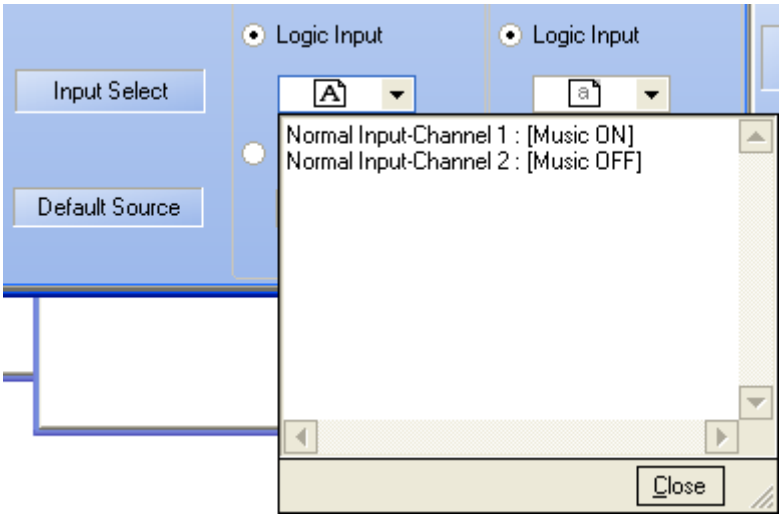


In order to select an event's type, use the drop-down menu. Then click OK. After you have press OK, you will return to the Events Selection window.

To edit your new event settings, select it by clicking on the right line and then click Edit. **Note: don't click in the square selector.** The corresponding event's type window will pop up. After your event settings are complete, click OK.

The last step is to affiliate the event created with the logical input. In order to do so, tick the square selector and click on insert. **Note: you can associate more than one event to an external trigger as well as creating event sequences. To learn more about it, please read this.**

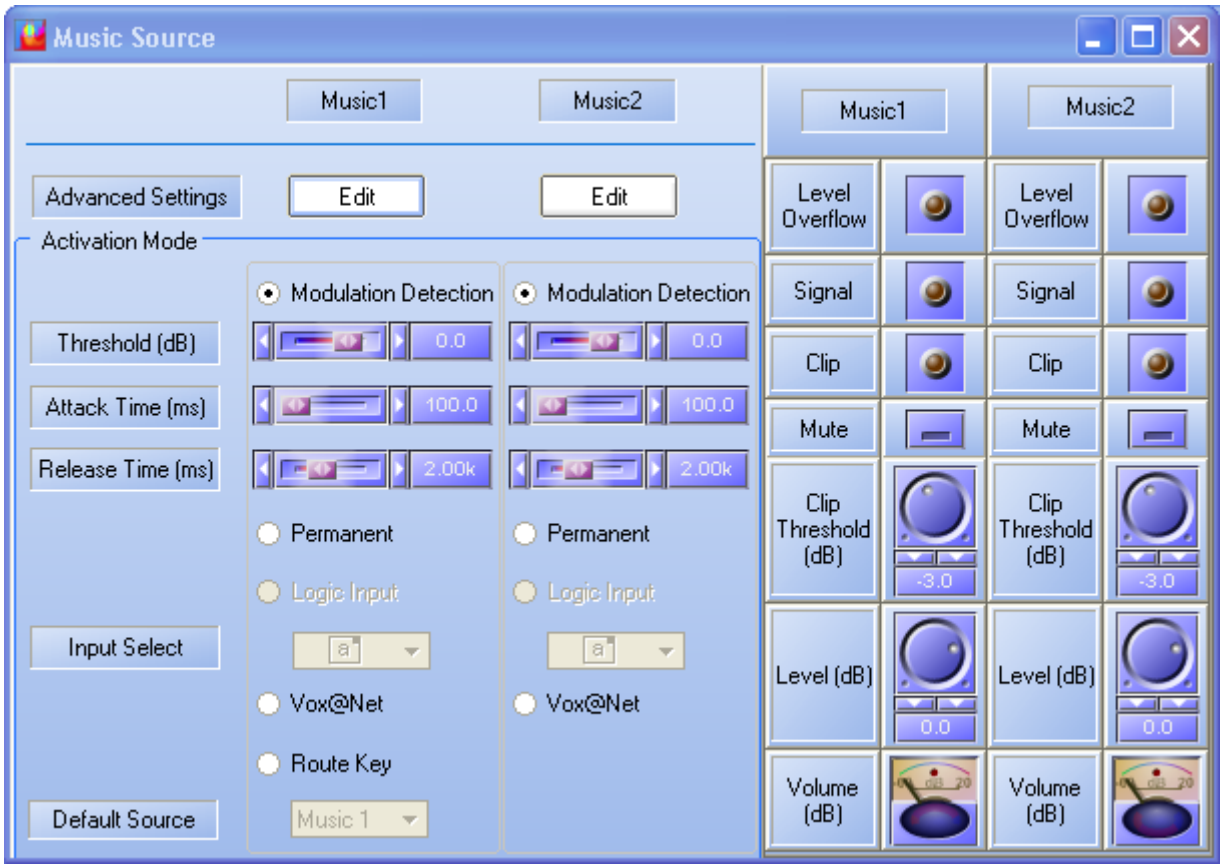
When logic input use event to control music sources, you can find a list of logic input associated to music source on the music source window in Logic Input drop-down menu.



9.26.6. Software Control

The DIVA software allows to control and monitor music sources. Once you have enter the music source window, by double clicking on the music source icon, you will be able to read and control some parameters (right part of the window, see below):

- **Level (dB):** when connected to DIVA, you can adjust, real time mode, the level of the music sources
- **Volume (dB):** indicates the current output level of the music source
- **Clip Threshold (dB):** allows to set the threshold point for the Clip indicator
- **Level Overflow:** this is a LED indicators that light up when a too high level is detected on the music source
- **Signal:** indicates the presence of audio signal
- **Clip:** indicates when the signal is clipping
- **Mute:** allows to mute music sources independently



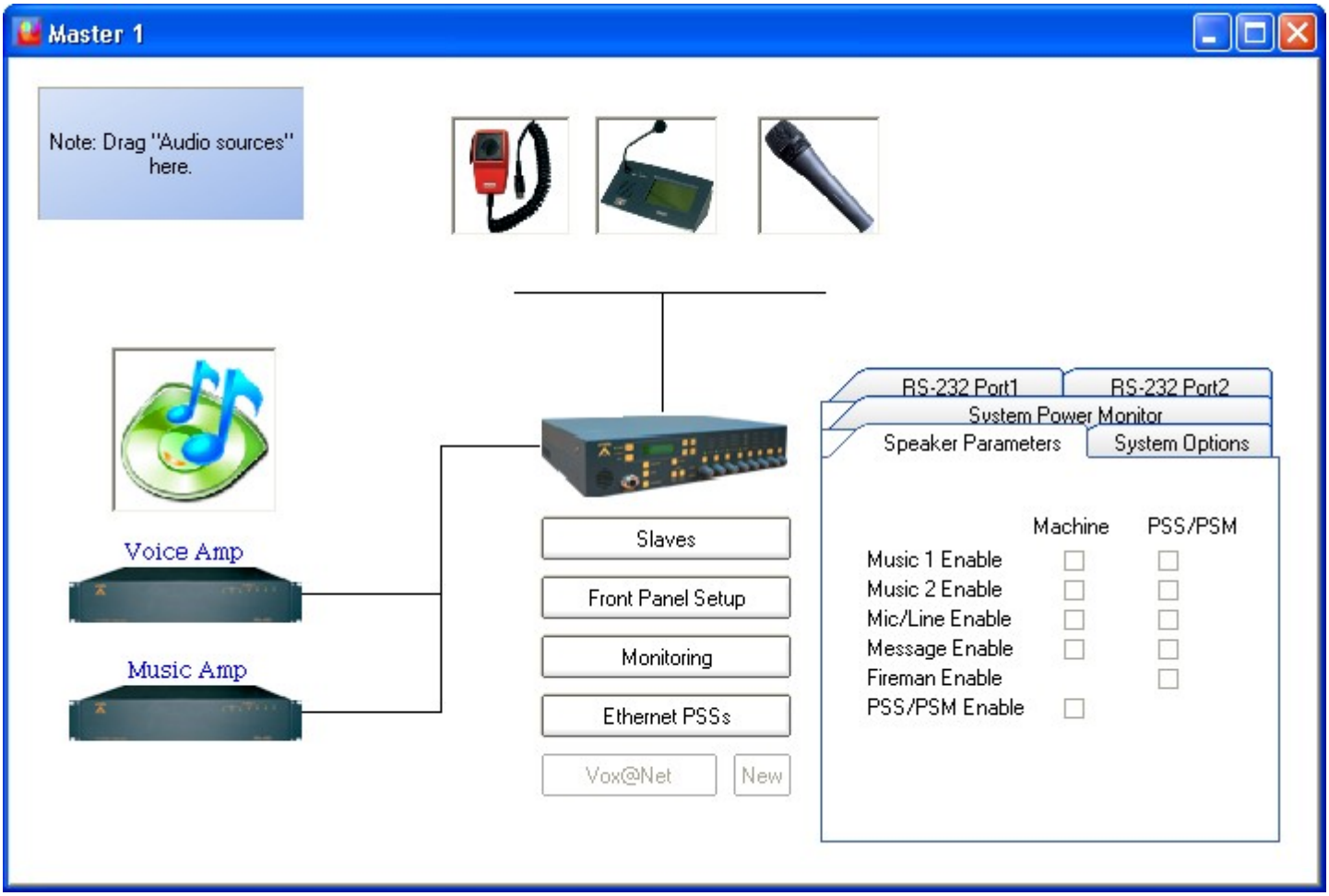
9.26.7. With Vox@net

When using a DIVA unit in a Vox@net system, you will have to use audio input, like music sources or Mic/Line, to enable audio coming from Vox@net. In combination with the Modan protocol, the audio input will be used by DIVA to braodcast audio from Vox@net.

To configure DIVA to work in a Vox@net system, please read the How to Put Diva in Vox@net chapters and the How to page in Vox@net chapters.

9.27. Use PSSG2 Microphone

PSSG2 microphone is an advance touchscreen paging microphone. The PSS keys can be set by the user using the PSS window in DIVA software. In order to use a PSSG2 microphone with DIVA, simply drag and drop the PSS microphone from the Design Component Section to the master window.



To access the PSS window simply double click on the PSS icon on the master page. In the PSS window, you will find two different tabs, one for property settings (General) and one for Keys configuration (Key).

Note: PSSg1 and PSSg2 offer the same setting possibilites, in the next chapters, PSS name will be used for both microphone.

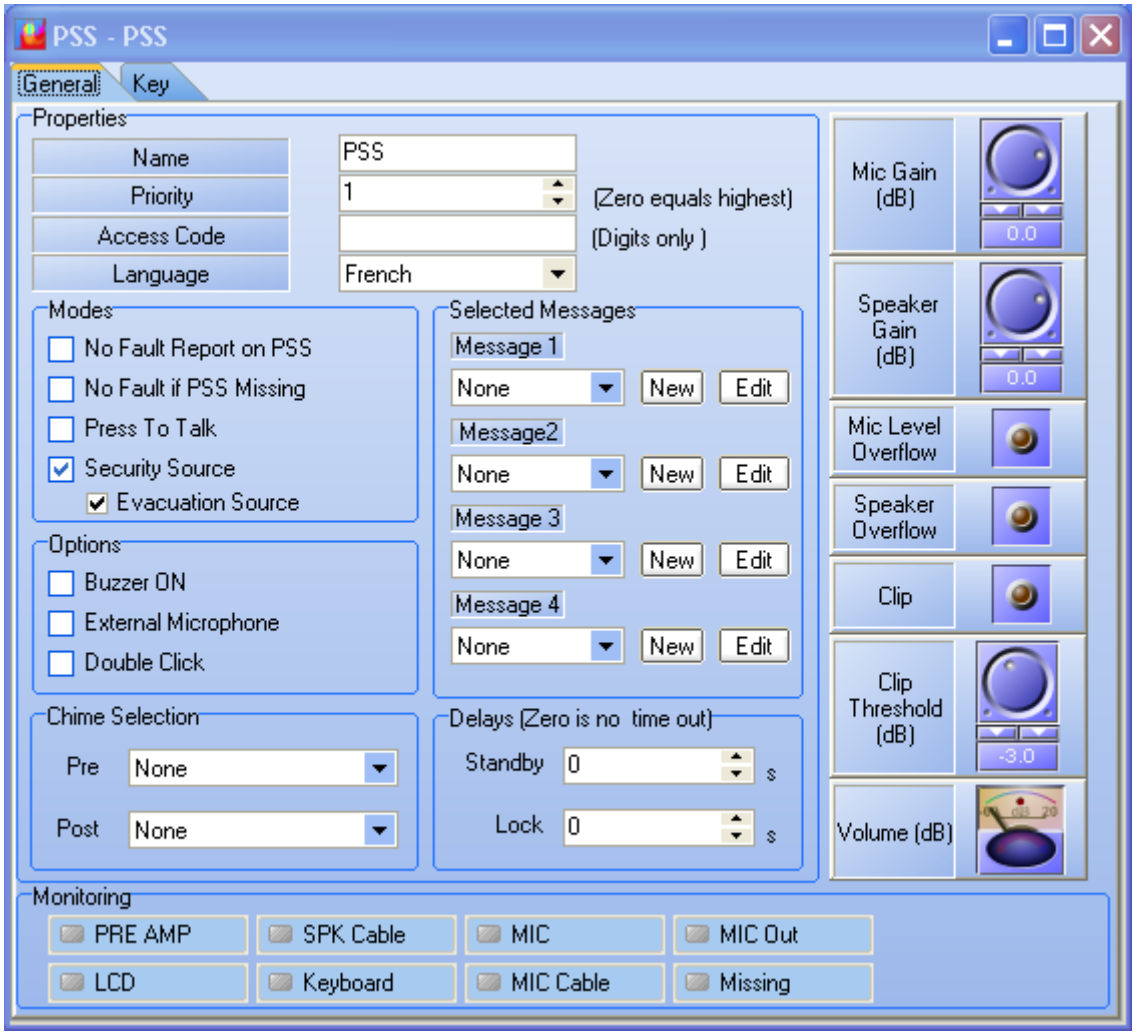
For further information on how to use PSS microphones, please read the PSS microphone manuals that can be found on the Ateis Europe website.

9.27.1. General Page

Here is a list of what are the accessible parameters in the General tab:

Properties Section:

- **Name:** here you can set a name for your PSS.
- **Priority:** here you can set the PSS priority. Take care when choosing a priority as the PSS could be a security microphone as well as a evacuation source.
- **Access Code:** you can specify an access code, only number, in order to be able to use the PSS screen.
- **Language:** allows user to set the PSS screen language between French, English, Russian, Romanian, Polish and German.



Mode:

- **No Fault Report on PSS:** if ticked, the PSS won't display faults of the DIVA system.
- **No Fault If Missing:** if ticked, DIVA won't display a fault if the PSS is not physically connected.
- **Press To Talk:** this option change the behaviour of the Mic key on the PSS screen from "Lock to Talk" to "Push to Talk". For calling in "Push to Talk" mode, you have to keep the PSS Mic key press as long as you want to talk.
- **Security source/Evacuation source:** if ticked, you will be able to use the PSS microphone when DIVA has entered the security mode. When ticked, it adds the option Evacuation Source. If evacuation source is selected, the paging from the PSS will act like an evacuation event. So the front panel EVAC LED will light up.

Options:

- **Buzzer On:** this options allows user to enable the PSS buzzer. It will beep for any DIVA fault status and for PSS internal fault.
- **External Microphone:** in case of using an other microphone that the gooseneck you will have to tick this option.
- Double Click: if ticked, to activate a PSS key you will need to press it twice.

Chime selection:

- **Pre:** allows to add a chime message at the beginning of a microphone call. Simply choose the pre-chime message from the drop down menu
- **Post:** allows to add a chime message at the end of a microphone call. Simply choose the post-chime message

from the drop down menu

Selected Messages:

- **Message 1 to Message 4:** with the use of the drop down menu you can add to the PSS up to 4 event buttons that will launch the corresponding selected events. This option is restricted for message type event. The play message event can be reached using the MSGs key on the PSS.

Monitoring:

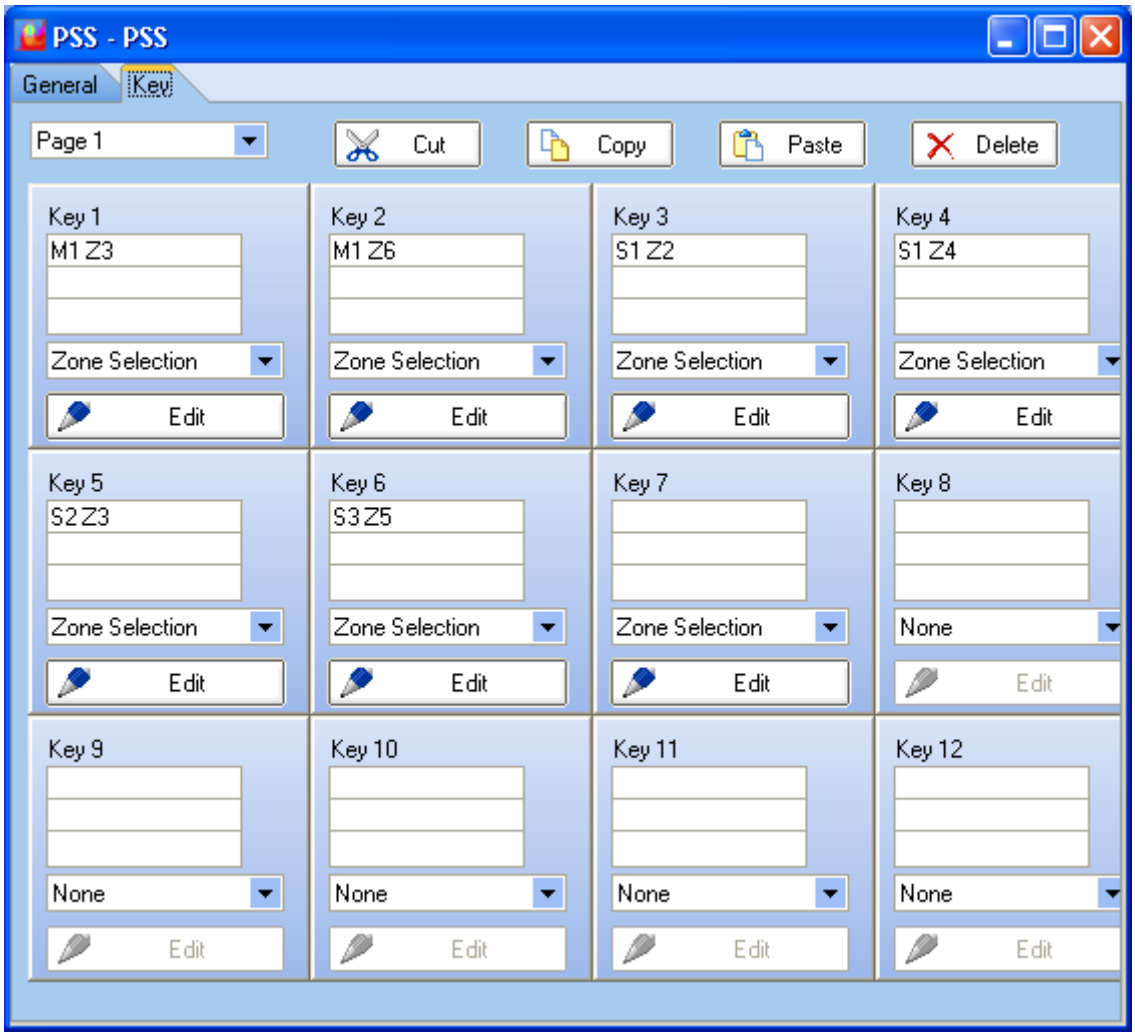
- **Pre Amp:** virtual LED that will light up in case of PSS microphone pre amplifier failure.
- **SPK Cable:** virtual LED that will light up in case of PSS integrated loudspeaker connection failure..
- **MIC:** virtual LED that will light up in case of microphone capsule issue.
- **MIC Out:** virtual LED that check the state of the microphone output.
- **LCD:** virtual LED that indicates any LCD screen fault.
- **Keyboard:** virtual LED that light up in case of touchpad issue.
- **MIC Cable:** virtual LED that will light up in case of microphone cable issue.
- **Missing:** virtual LED that light up if the PSS is not plug into DIVA.

Controls and Indicators:

- **Mic gain (dB):** when connected to DIVA, you can adjust, real time mode, the gain of the PSS microphone.
- **Speaker gain (dB):** when connected to DIVA, you can adjust, real time mode, the gain of the PSS internal speaker.
- **Volume (dB):** indicates the current output level of the music source.
- **Clip Threshold (dB):** allows to set the threshold point for the Clip indicator.
- **Mic Overflow:** this is a LED indicators that light up when a too high level is detected on the PSS microphone.
- **Speaker Overflow:** this is a LED indicators that light up when a too high level is detected on the PSS speaker.
- **Clip:** indicates when the signal is clipping.

9.27.2. Keys Page

The Key page is where you will define keys for the PSS and their associated action. Depending on the PSS model, you can specify up to 96 keys so 96 actions.



It's important to notice that you can only visualize 12 key at the same time. To see up to 96 keys, you have to jump to pages with the drop-down menu at the upper left corner. You also can cut, copy, paste and delete keys with the upper corresponding button.

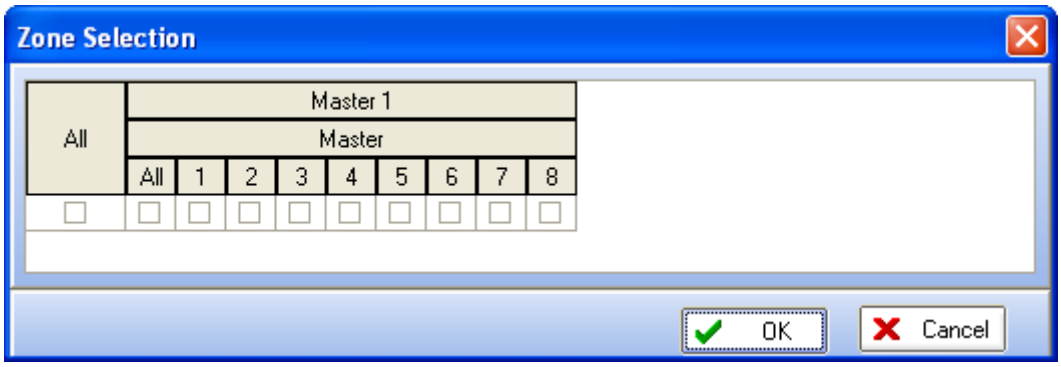
In order to create a key, follow the next few steps:

- In the three square, enter a key label (3x 6 digits)
- With the drop-down menu, select a key type (some keys type will automatically open a popup window for parameters setting), see below for the complete list ok key functions
- Edit your key settings by clicking on the Edit button

Key functions:

- **Zone Selection:**

The zone selection key allows user to arrange to his will the selection of the zone. As soon as the zone selection type has been selected, the zone selection window will appear. Simply tick the zone corresponding to your needs and click OK.



- **Route:**

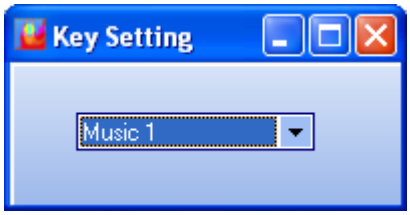
The Route key act like the one on the front panel, it has to be used to validate the routage of a music source in some zones.

- **Music Source Selection:**

When creating a music source selection key, you will have to specify the corresponding music source with the help of the musis source selection window.

- **Music Level + / Music Level -:**

The Music Level + and - need to be associated with a music source. The selection of the music source is made with the music source selection window. **Note: Music Level + and Music Level - are two distinct keys.**



- **Speaker Level + / Speaker Level -**

The Speaker Level keys act on the PSS internal speaker. You can adapt PSS speaker level to your desire. **Note: Speaker Level + and Speaker Level - are two distinct keys.**

- **Event Start / Event Stop**

Those two keys are an additional way of starting and stoping events that are not selected in the message section. You can start and stop any kind of event. Keep in mind that each event started by a Event Start key need a Event stop key.

When creating an Event Start/Stop key, you will have to select in the existing event list the one to associate to the key.

- **Push-To-Talk Microphone Call**

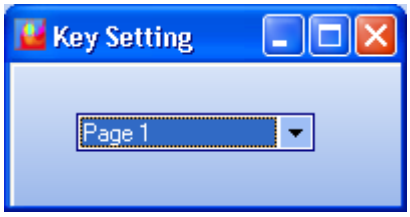
  The Push-To-Talk Microphone Call key allows to change the behaviour of the microphone call. The default behaviour for the microphone (Mic Key) is the locked to talk. In order to make a microphone call, you will have to keep the key pressed during the entire speaking process.

- **Push-To-Talk Chime Call**

  The Push-To-Talk Chime Call key has to be used like the Push-To-Talk Microphone Call. The difference is that for each call, a pre-chime message will be played. **Note: don't forget to load a chime message in the general PSS page.**

- **Jump To Page**

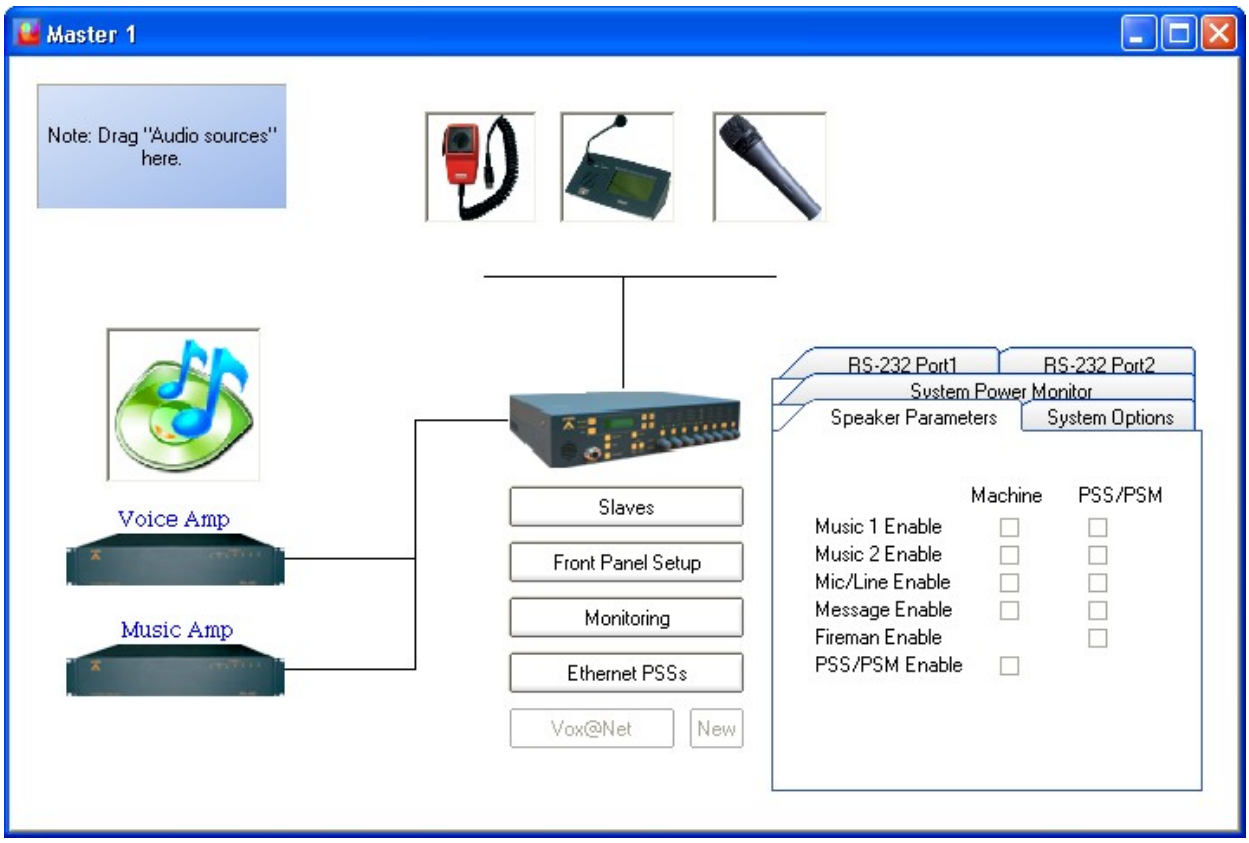
  When using a PSSXXDT that has over 12 keys, it will be needed to create key that allows to jump from page to page. As soon as you select the Jump To Page type of key, a page selection window will pops up, please select the page where you want to jump.



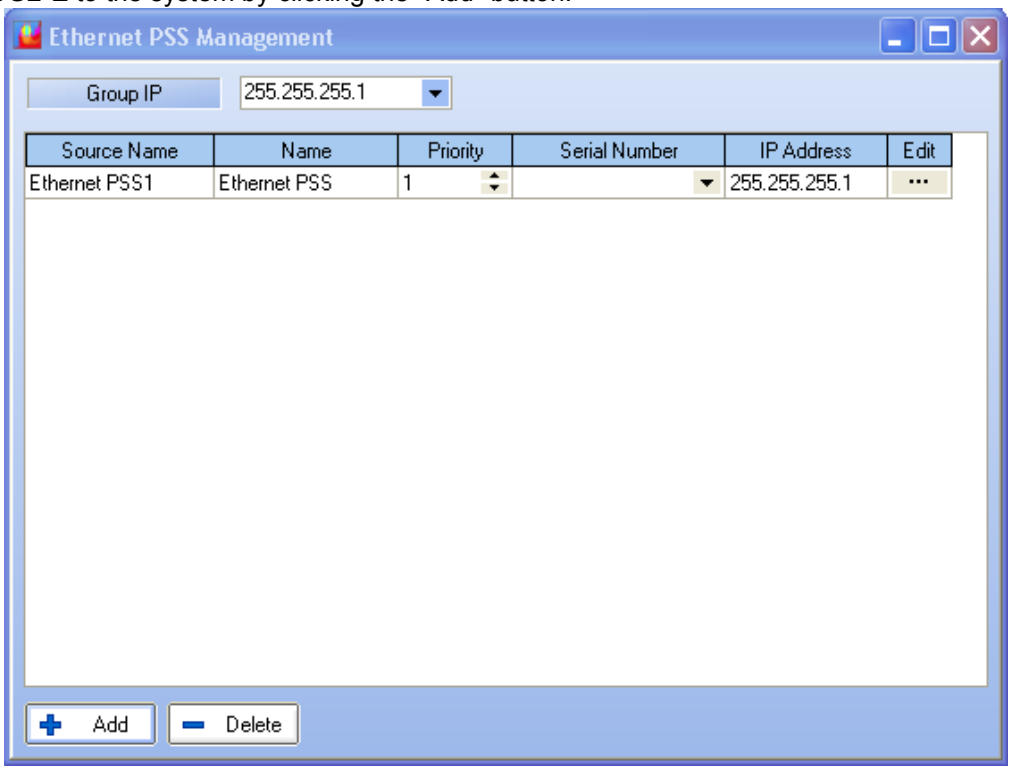
9.28. Use PSSG2-E Microphone

In order to use and configure the PSSG2-E, one has to create the TCP/IP link between the DIVA and the PSS microphone console. In order to do so, follow the next steps.

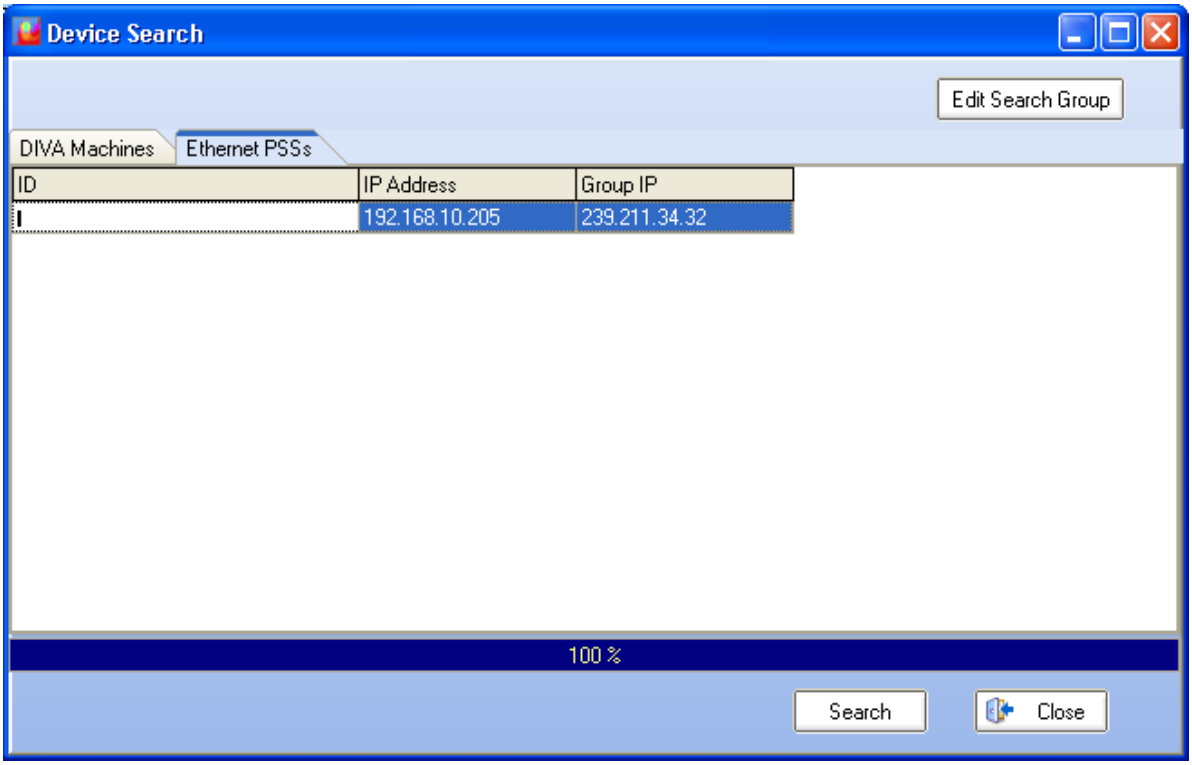
- On the Master window, click on the Ethernet PSS button.



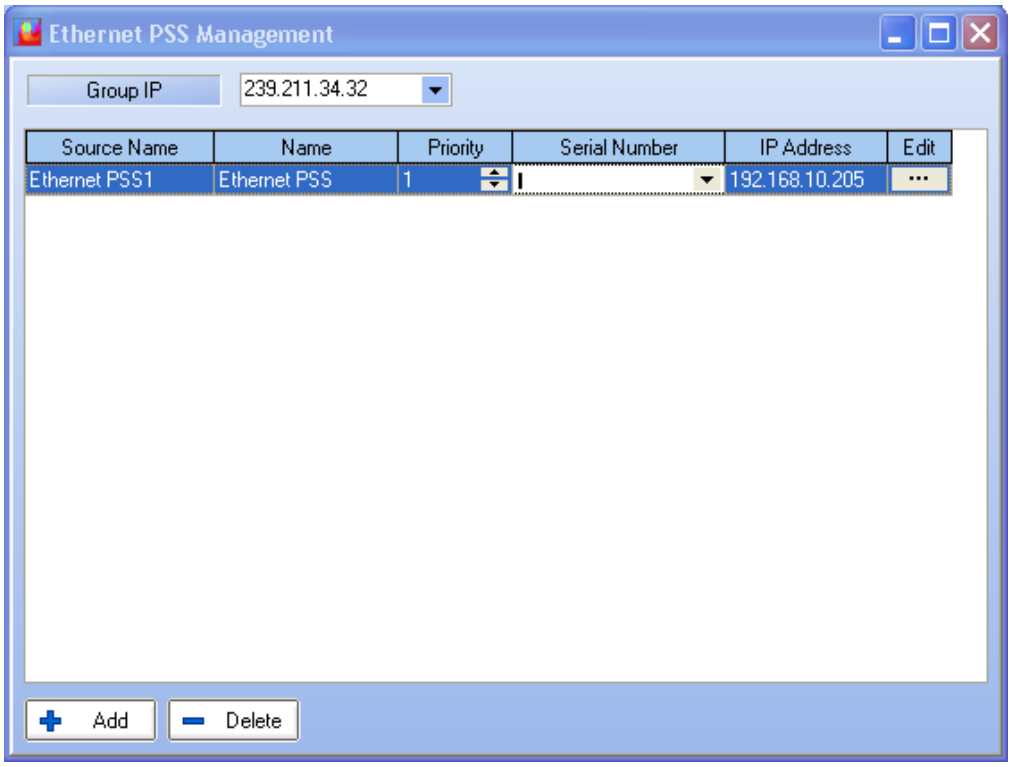
- Add a PSSG2-E to the system by clicking the "Add" button.



- As for any TCP/IP based product, one have to search for it on the network. To do so, go in the menu: Tools -> Device Search -> Ethernet PSS tab.
- Click on the "Search" button.
- Once the search process ends, it should display all Ethernet PSS on the network. If for some reason, no Ethernet PSS is found, please enter the searched TCP/IP address range by clicking on the "Edit Search Group" button.



- When the Ethernet PSS has been found, return to the "Ethernet PSS management" window, see below.
- With the "Serial Number" drop-down menu, choose the corresponding PSSG2-E serial number.
- The IP address should be automatically filled.
- You have the possibility to change the name of the console by entering a new name in the name cell.
- Select the Group IP for the Ethernet PSS using the drop-down menu.
- Set the microphone console priority with the arrow keys.

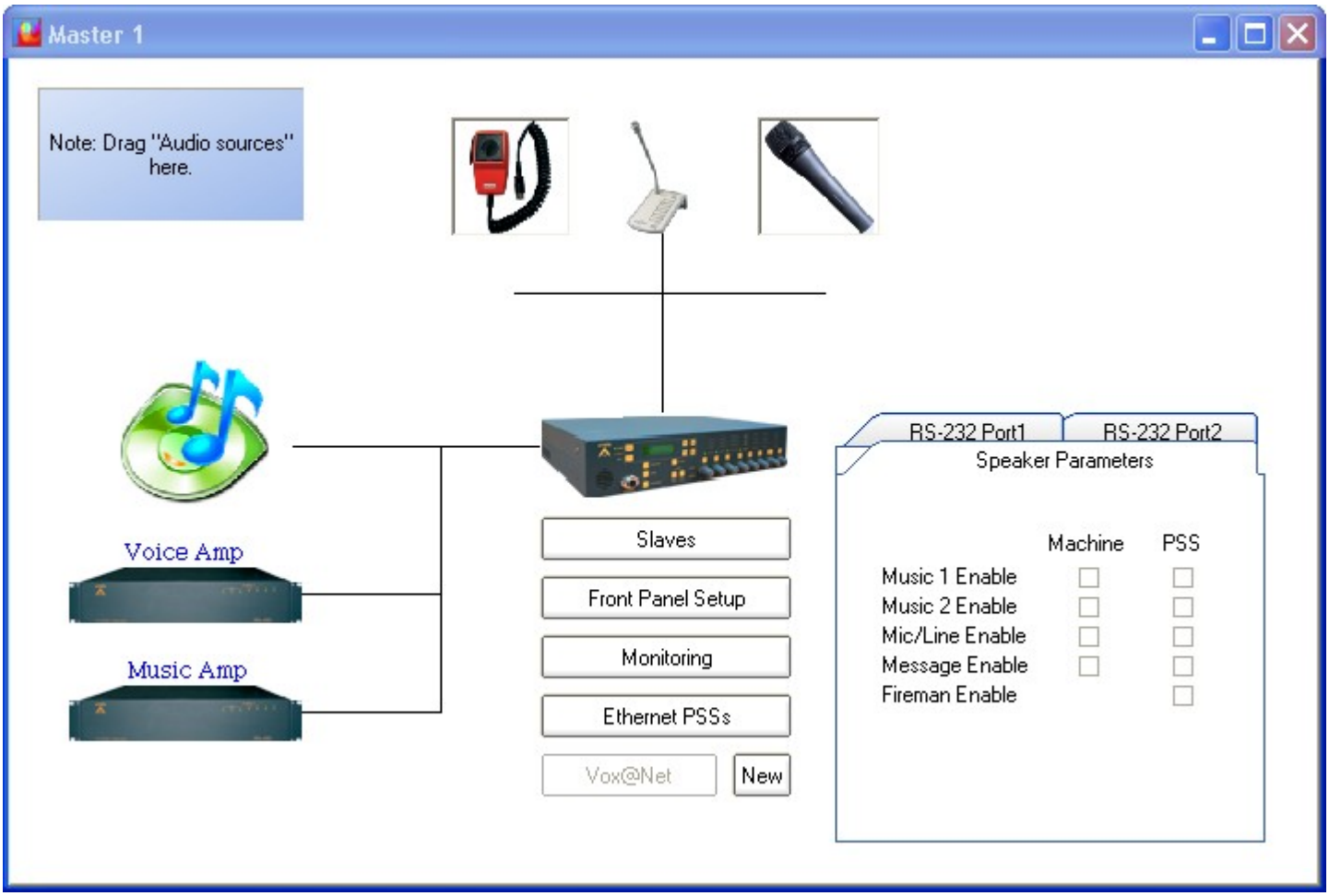


- To configure the Keys, click on the "3 dots" button under Edit column. As the PSSG2 and PSSG2-E uses exactly the same configuration options, please refer to the PSSG2 General Page and Keys Page chapter.

9.29. Use PSM8 Microphone

As described briefly in the External Device - PSM chapter, The PSM8 is a 10 keys call station on which 8 are programmable with microphone, integrated loudspeaker and buzzer. It can be used with either IDA4(X)(M)(s) or DIVA8M. It is possible to add up to 11 extensions to the PSM8 increasing programmable keys number to 96. In order to use a PSM microphone with DIVA, simply drag and drop the PSM microphone from the Design Component Section to the master window.

The PSM microphone can also be cascaded, and you can slave up to 10 PSMs.



To access the PSM programming window, simply double-click on the PSM icon.

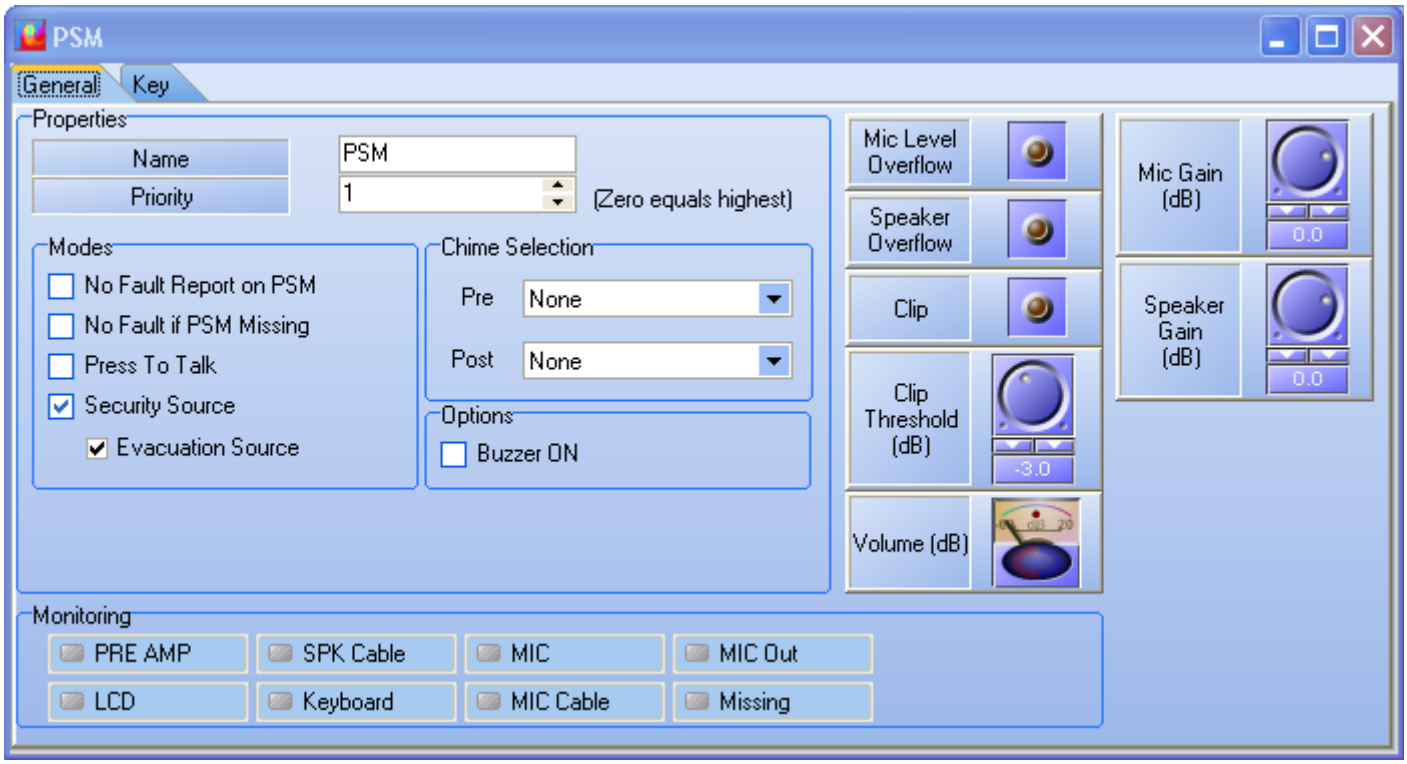
For more information about PSM microphone and its use, please read the PSM user manual that can be found on the Ateis-Europe website.

9.29.1. General Page

Here is a list of parameters that can be adjusted in the General tab:

Properties Section:

- **Name:** here you can set a name for your PSM
- **Priority:** here you can set the PSM priority. Take care when choosing a priority as the PSM could be a security microphone as well as a evacuation source.



Mode:

- **No Fault Report on PSM:** if ticked, no DIVA fault status will be shown on the PSM fault LED.
- **No Fault If Missing:** if ticked, DIVA won't display a fault if the PSM is not physically connected
- **Press To Talk:** this option change the behaviour of the Mic key on the PSM screen from "Lock to Talk" to "Push to Talk". For calling in "Push to Talk" mode, you have to keep the PSM Mic key press as long as you want to talk
- **Security source/Evacuation source:** if ticked, you will be able to use the PSM microphone when DIVA has entered into the security mode. When ticked, it adds the option Evacuation Source. If evacuation source is selected, the paging from the PSM will act like an evacuation event. So the front panel EVAC LED will light up.

Chime selection:

- **Pre:** allows the addition of a chime message at the beginning of a microphone call. Simply choose the pre-chime message from the drop down menu
- **Post:** allows the addition of a chime message at the end of a microphone call. Simply choose the post-chime message from the drop down menu

Options:

- **Buzzer ON:** this option allows user to enable the PSM buzzer. It will beep for any DIVA fault status and for PSM internal fault

Monitoring:

- **Pre Amp:** virtual LED that will light up in case of PSM microphone pre amplifier failure
- **SPK Cable:** virtual LED that will light up in case of PSM integrated loudspeaker connection failure
- **MIC:** virtual LED that will light up in case of microphone capsule issue
- **MIC Out:** virtual LED that check the state of the microphone output
- **Keyboard:** virtual LED that light up in case of touchpad issue
- **MIC Cable:** virtual LED that will light up in case of microphone cable issue

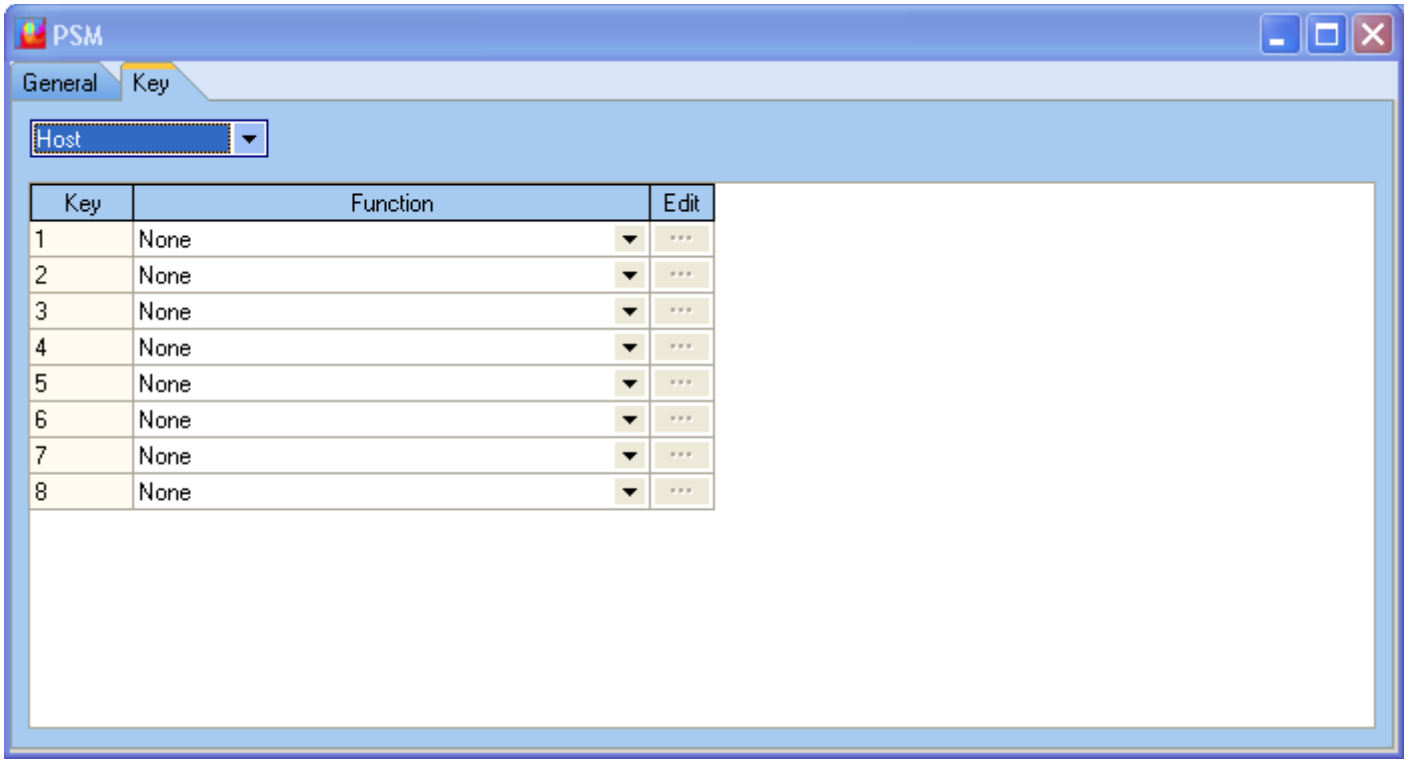
- **Missing:** virtual LED that light up if the PSM is not plug into DIVA

Controls and Indicators:

- **Mic gain (dB):** when connected to DIVA, you can adjust, real time mode, the gain of the PSM microphone.
- **Speaker gain (dB):** when connected to DIVA, you can adjust, real time mode, the gain of the PSM internal speaker.
- **Volume (dB):** indicates the current output level of the music source.
- **Clip Threshold (dB):** allows the setting of the threshold point for the Clip indicator.
- **Mic Overflow:** this is a LED indicator that light up when a too high level is detected on the PSM microphone.
- **Speaker Overflow:** this is a LED indicator that light up when a too high level is detected on the PSM speaker.
- **Clip:** indicates when the signal is clipping.

9.29.2. Keys Page

The key tab offers the possibility to program the eight first keys of the PSM (Host) and the keys of several PSM extension/keypad (keypad 1 to 11). In order to go through the different extension, use the main drop-down menu.



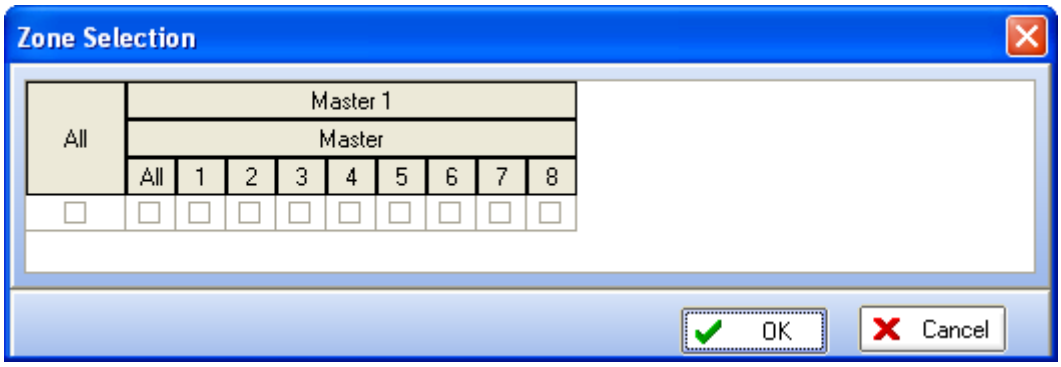
In order to create a key, follow the next few steps:

- With the drop-down menu corresponding to the key you want to set, select a key type (some keys type will automatically open a popup window for parameters setting). see below for the complete list ok key functions
- Edit your key settings by clicking on the Edit button

Here is a list of the key functions that can be used with the PSM:

- **Zone Selection:**

The zone selection key allows user to arrange to his will the selection of the zone. As soon as the zone selection type has been selected, the zone selection window will appear. Simply tick the zone corresponding to your needs and click OK.



- **Route:**

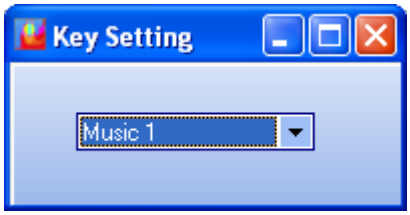
The Route key act like the one on the front panel, it has to be used to validate the routing of a music source in some zones.

- **Music Source Selection:**

When creating a music source selection key, you will have to specify the corresponding music source with the help of the musis source selection window.

- **Music Level + / Music Level -:**

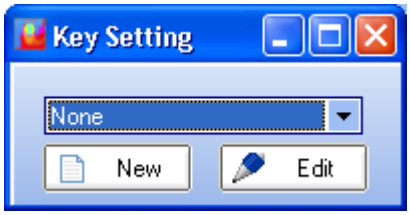
The Music Level + and - need to be associated with a music source. The selection of the music source is made with the music source selection window. **Note: Music Level + and Music Level - are two distinct keys.**



- **Event Start / Event Stop**

Those two keys are an additional way of starting and stoping events that are not selected in the message section. You can start and stop any kind of event. Please be careful to the fact that you will need a stop event key for each start event key for play message type of event.

When creating an Event Start/Stop key, you will have to select in the existing event list the one to associate to the key.



- **Push-To-Talk Microphone Call**

  The Push-To-Talk Microphone Call key allows to change the behaviour of the microphone call. The default behaviour for the microphone (Mic Key) is the locked to talk. In order to make a microphone call, you will have to keep the key pressed during the entire speaking process.

- **Push-To-Talk Chime Call**

  The Push-To-Talk Chime Call key has to be used like the Push-To-Talk Microphone Call. The difference is that for each call, a pre-chime message will be played. **Note: don't forget to load a chime message in the general PSM page.**

9.29.3. Slave PSM

With PSM microphones, the keys configuration is identical for the Master and Slave. Using slaves do not allow simultaneous microphone calls, the philosophy is the first who calls has the priority.

The Master PSM microphone is defined as the first one in the cascade, the closest to the IDA.

In order to achieve a PSM cluster, Junction box have to be used. Up to 10 PSM can be cascaded, please read How to Wire PSM to learn more about the connection.

9.30. Use CD16 Microphone

The CD16 microphone is considered as a PSM microphone from a configuration point of view. Up to 10 CD16 microphones can be cascaded.

The CD16 offers Cinch connectors for music inputs. The CD16 music input should be configured as normal music sources in the DIVA software, please read this chapter.

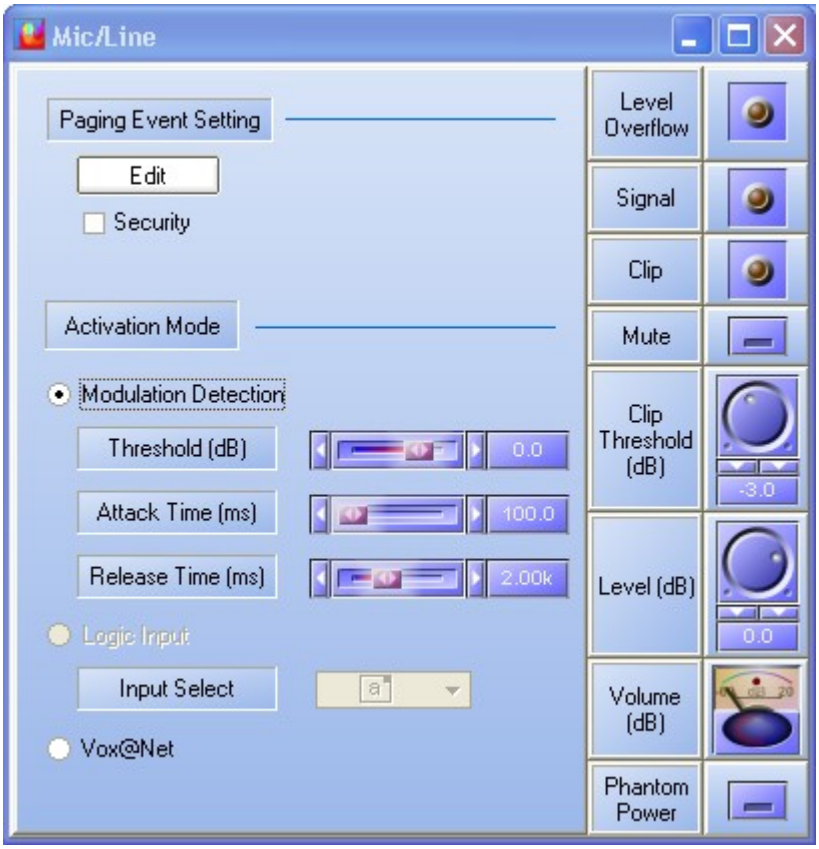
The CD16 offers also independent music source selection buttons that, in addition with a configured route key, will make music routing as easy as on the front panel.

To learn how to configure CD16 general options and keys, please refer to the PSM General page and keys page chapters.

9.31. Use MIC/LINE Input

The Mic/Line input can be used as a direct input for one external hand microphone and as an additional music input. The input gain can be adjusted by the means of the screw on the back panel of DIVA.

In order to use the Mic/Line input, first drag and drop Microphone or Line In from the Design Component Section to the Master window. Double-click the Microphone or Line In icon to enter the Mic/Line window, see below.



The Mic/Line has three activation modes:

- **Modulation Detection**

The modulation detection mode is like the VOX mode. It allows you to activate a source as soon as a certain amount of signal is detected.

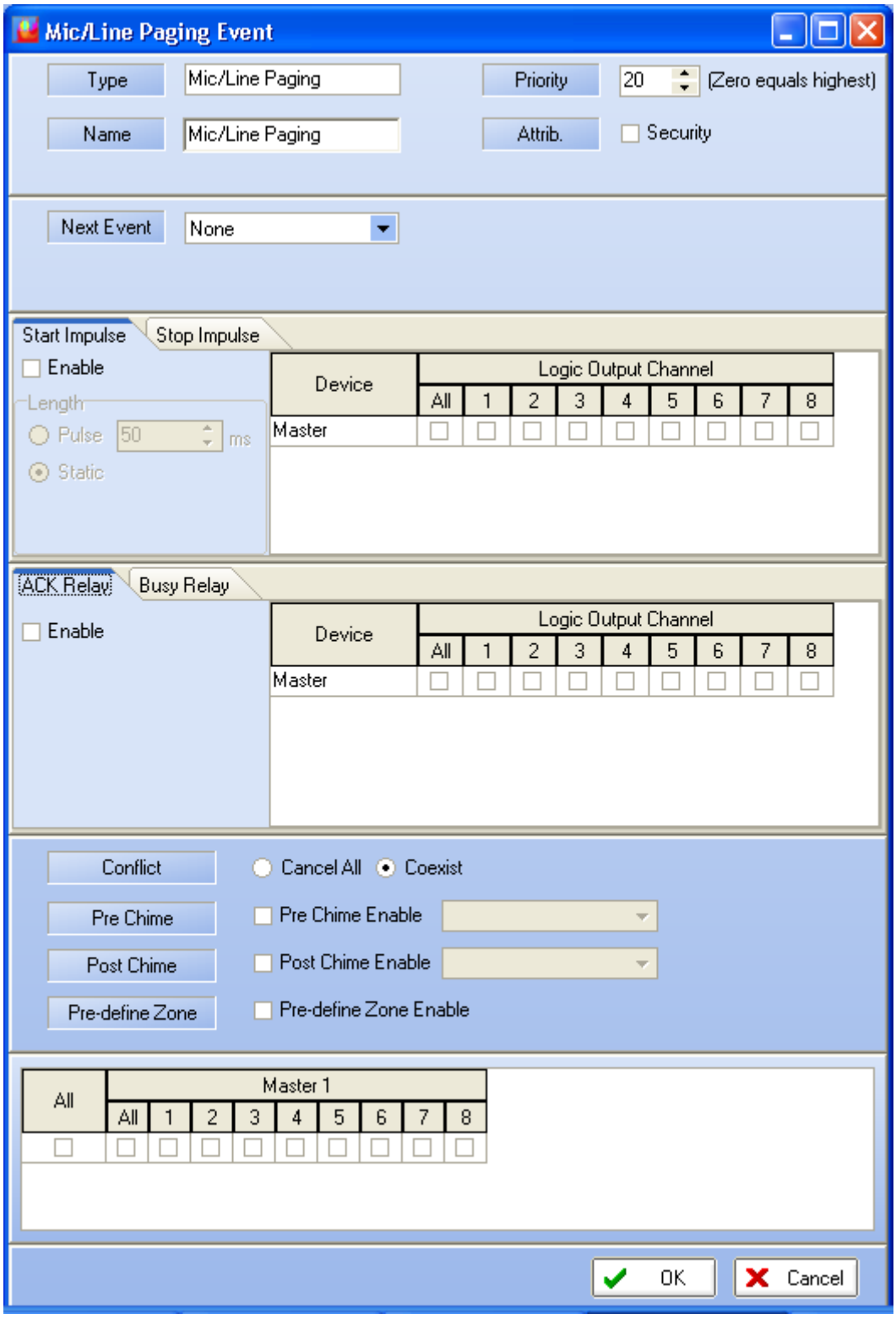
- **Logic Input**

Using music from logic input allows user to manage external trigger to control the routing of music sources.

- **Vox@Net:**

The MIC/LINE input can be use as audio input for Vox@net audio streaming, please refer to the How to Put DIVA in Vox@Net chapter.

By clicking the Edit Button you will enter the Mic/Line Paging Event window. Here you will be able to set up parameters of this event, see below.



- **Type:** display the type of event you are creating or modifying
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not and if it is an evacuation event or not. See Common Option to learn more about the security option

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- **Next Event:** here you can select the event to start after the current on is finished

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- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** you can specify here an logic output channel that will be closed when the event is active..
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is active in one of the pre-define zones.

To learn more about output relay, please read the How To Use Output Relay.

- **Conflict:** you can choose between Cancel All or Coexist
- **Pre-Chime:** allows to add a chime message at the beginning of a microphone call. Simply choose the pre-chime message from the drop down menu
- **Post-Chime:** allows to add a chime message at the end of a microphone call. Simply choose the post-chime message from the drop down menu
- **Pre-define Zone:** if ticked, you can choose pre defined zone with the zone selector

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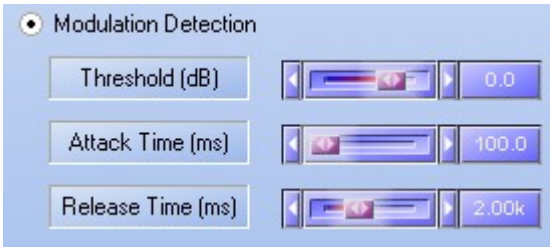
- **Zone Selection:** here you can specify the zone(s) where the call will be played

9.31.1. With Modulation Detection

The modulation detection mode allows to automatically route the Mic/Line source in case of signal presence. The behaviour is the same that for music sources.



In order to use the modulation detection, tick the Modulation Detection option for the source you want to use that way. Once the option selected, you will have access to detection settings:

- **Threshold (dB):**

The threshold setting will set the trigger point for activation of the Mic/Line source. If the threshold is set to -10 dB, the Mic/Line source activation will take place when the signal received from that source will be over -10 dB.

- **Attack Time (ms):**

The Attack time can be understood like the amount of time that the signal has to be over the threshold point before music source will be activated. A correct setting of the attack time can avoid inopportune activation of the Mic/Line source (peak signal activation). The Attack time can be set from 0 ms to 5000 ms.

- **Release Time (ms):**

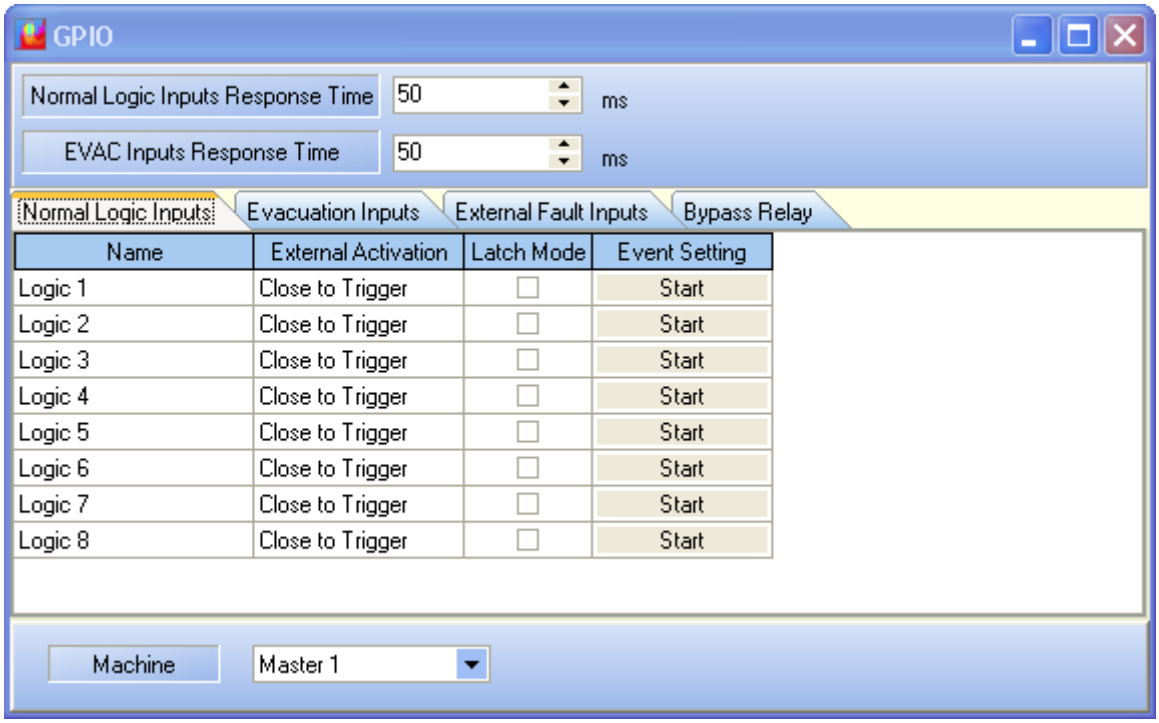
As opposed to the Attack time, the Release time is the amount of time for which the signal have to stay under the threshold point before deactivation of the Mic/Line sources. A correct Release Time can avoid inopportune deactivation of the music source (pause in speech). The release time can be set from 0 ms to 5000 ms.

Setting those parameter correctly needs some experience, so be careful and please test it to learn more about the behaviour of this option.

Once your modulation detection parameters are adjusted, you have to edit the advance setting for the Mic/Line, please refer to the Use Mic/Line Input general chapter.

9.31.2. From Logic Input

Mic/Line routing can be operate by external trigger, that means with the help of the logic, evacuation or even external fault inputs. In order to access the logic inputs menu, go on menu View -> Logic Inputs. The Logic Inputs page will pops up, see below.

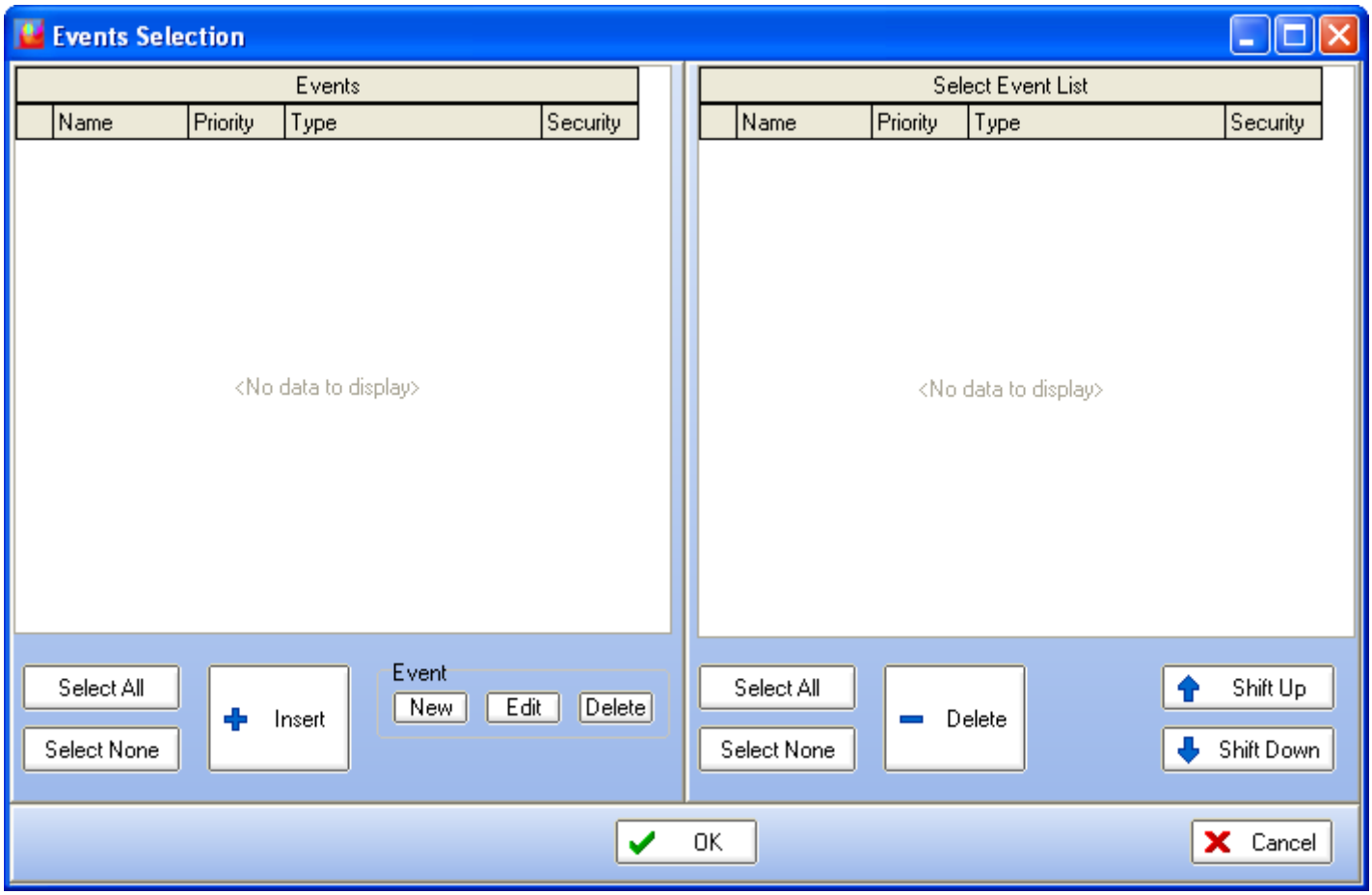


To learn more about the Logic inputs, see How to Use Logic Inputs.

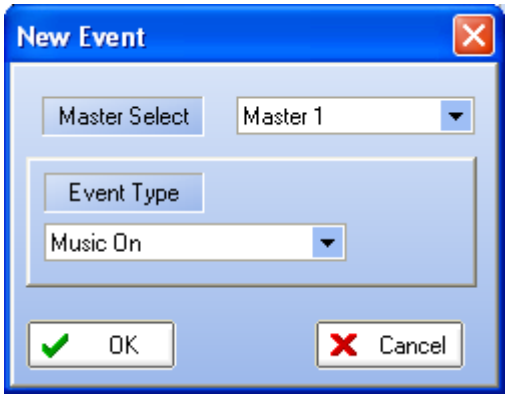
The idea is to use logical trigger to start an event. Event type for operation on Mic/Line are listed below. You can find more information on those events in the chapter How To Use Events.

- Mic/Line Paging Event

In order to associate a event to a logic input trigger, click on the "Start" button under "Event Setting". The Events Selection window will be open, see below.



On the left side, you will find the list of existing event. To create a new event, simply click on New under Event. As soon as you click on the New button, the software will ask to choose a event's type, see below.



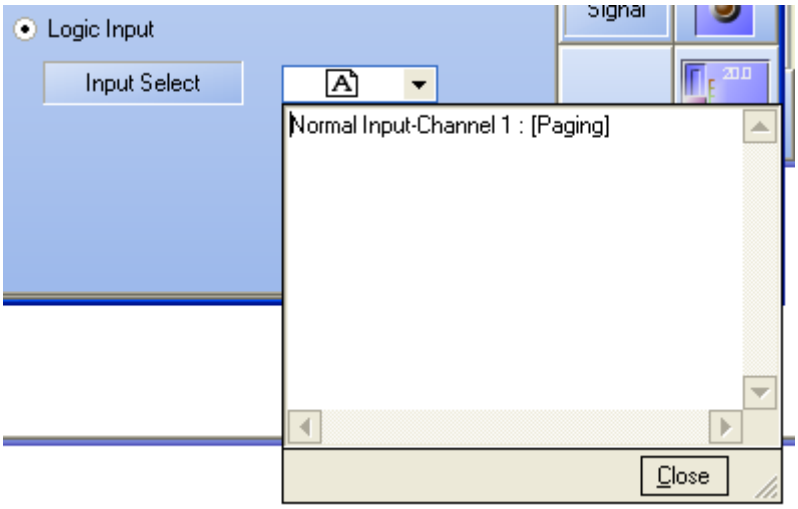
In order to select the event's type, use the drop-down menu. Then click OK. After you have press OK, you will return to the Events Selection window.

To edit your new event settings, select it by clicking on the right line and then click Edit. **Note: don't click in the square selector.** The corresponding event's type window will pop up. After your event settings are complete, click OK.

The last step is to affiliate the event created with the logical input. In order to do so, tick the square selector and click on insert. **Note: you can associate more than one event to an external trigger as well as creating event sequences. To learn more about it, please read this.**

When logic input have set for Mic/Line source, you can find a list of logic input associated to Mic/Line source on the

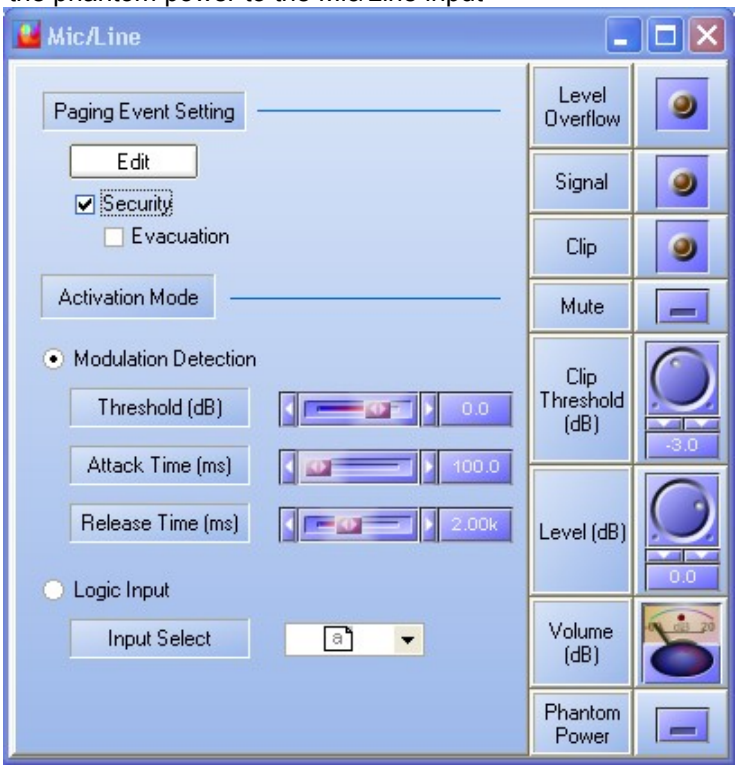
Mic/Line window in Logic Input drop-down menu.



9.31.3. From Software

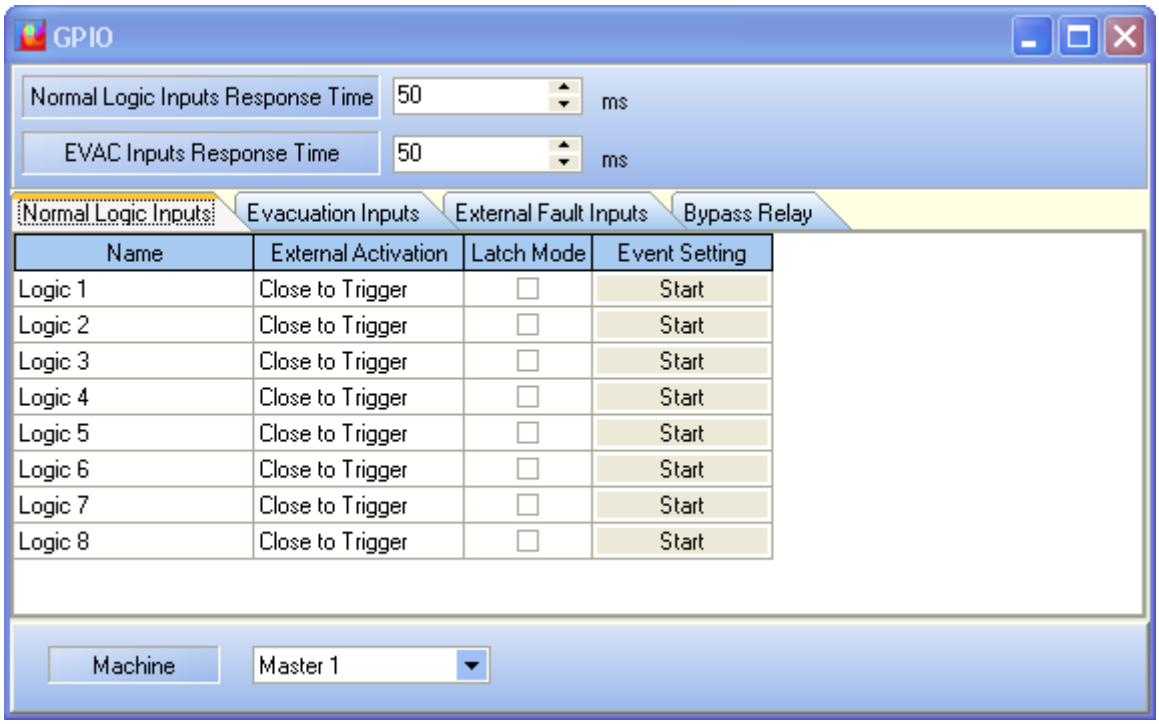
The DIVA software allows the control and the monitoring of the Mic/Line source. Once you have entered the Mic/Line window, by double clicking on the Mic/Line icon, you will be able to read and control some parameters (right part of the window, see below):

- **Level (dB):** when connected to DIVA, you can adjust, real time mode, the level of the music sources
- **Volume (dB):** indicates the current output level of the music source
- **Clip Threshold (dB):** allows to set the threshold point for the Clip indicator
- **Level Overflow:** this is a LED indicators that light up when a too high level is detected on the music source
- **Signal:** indicates the presence of audio signal
- **Clip:** indicates when the signal is clipping
- **Phantom Power:** add the phantom power to the Mic/Line input



9.32. Use Logic Inputs

Logic inputs are a way to start any type of event with an external trigger. They are separated in three different types:



- Normal Logic Inputs:

  The eight normal logical inputs are simple logical inputs with no monitoring options.

- Evacuation Inputs:

  The nine evacuation inputs can be used as simple logical inputs as well as monitored logical inputs. Monitoring type are on contact or voltage UGA. In contact monitored mode and using a resistor network, the measurement unit can detect 4 different states: 1.3 V, 2 V, 2.7 V and 4.4 V. The 4 states correspond respectively to Shortcut, Closed Contact, Opened contact and Absent (open line). The voltage UGA monitoring mode is based on polarizing the input with an external 24V source.

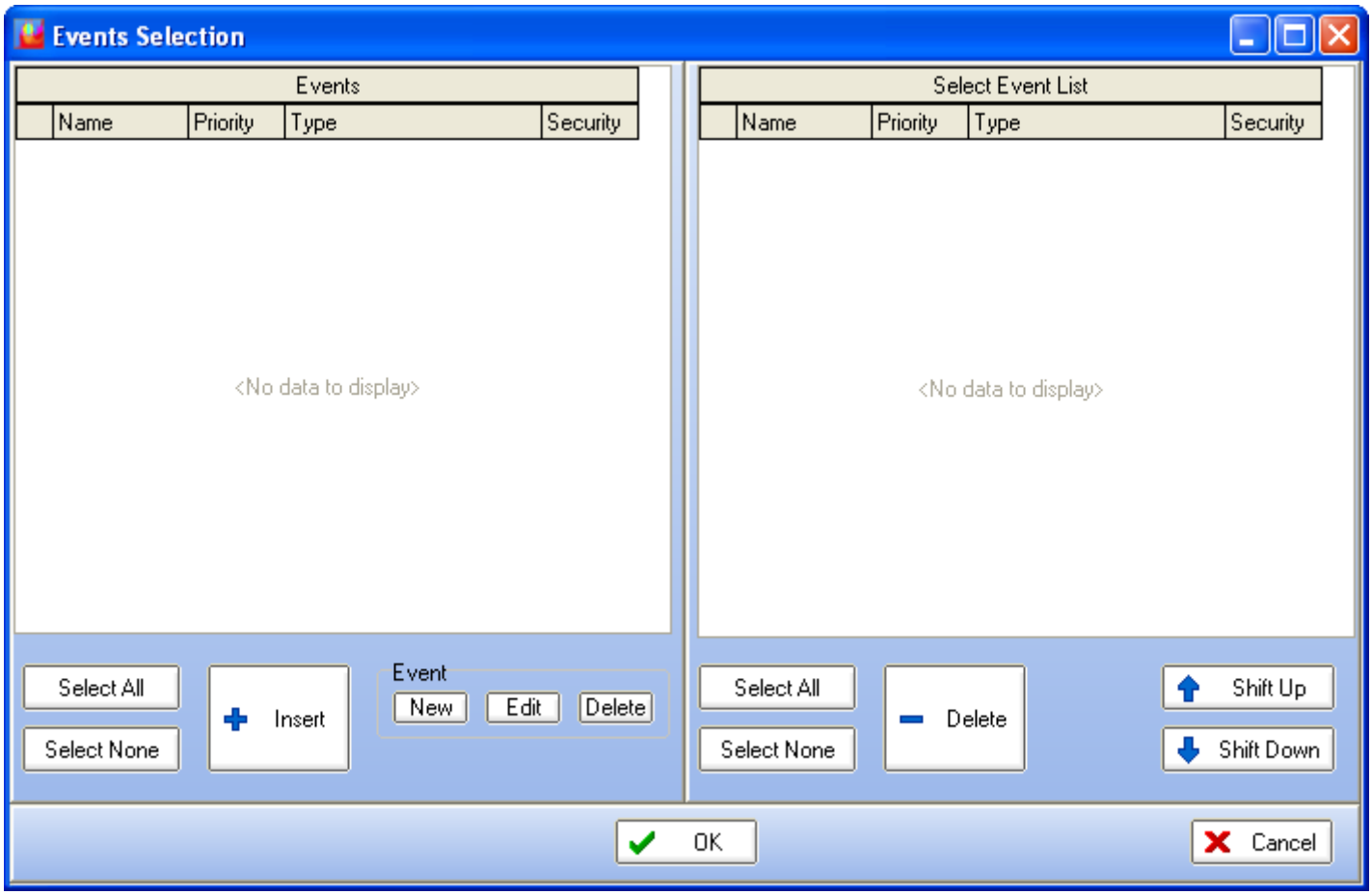
- External Fault Inputs:

  External Fault Inputs are used to put DIVA into security mode.

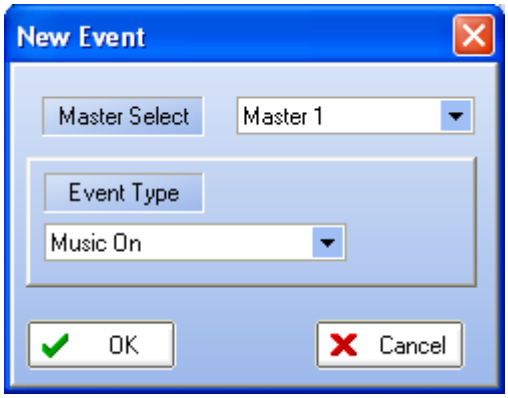
In order to avoid any sensitivity issue like unwanted triggering of input, you can set a response time on either Normal Logic inputs or Evacuation Inputs. This response time act like an activation delay, it means that the trigger signal should be at least as long as the response time to activate the corresponding logic input. Response time range is from 0ms to 5000ms.

The way to configure event for all logic inputs' type is identical. Please read the few next step to know how to associate an event to a logic input:

Click on the "Start" button under "Event Setting". The Events Selection window will be open, see below.



On the left side, you will find the list of existing event. To create a new event, simply click on New under Event. As soon as you click on the New button, the software will ask to choose a event's type, see below.



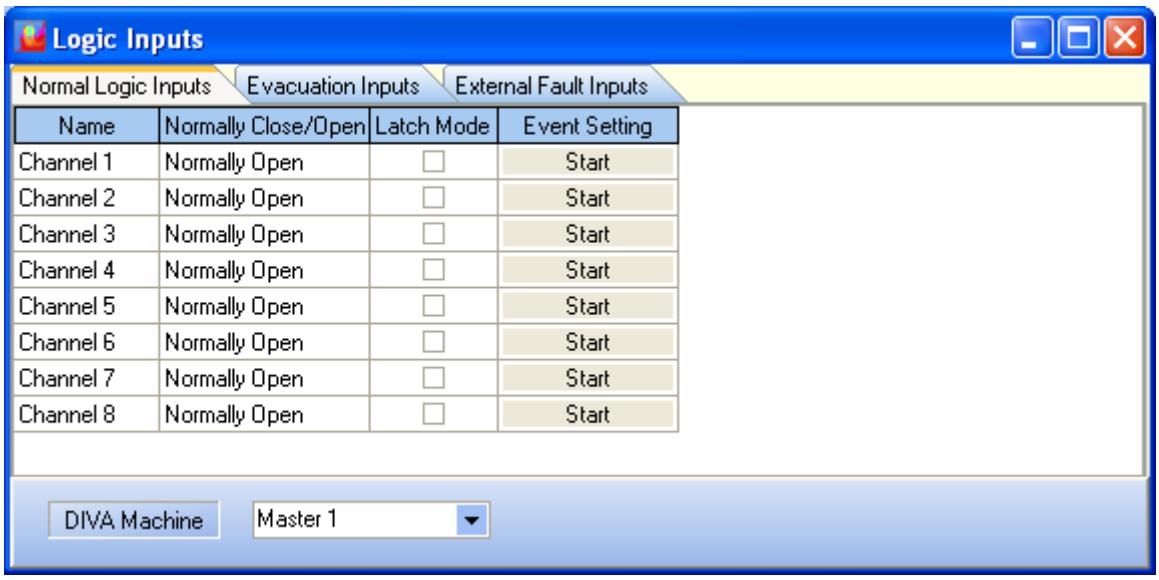
In order to select an event's type, use the drop-down menu. Then click OK. After you have press OK, you will return to the Events Selection window.

To edit your new event settings, select it by clicking on the right line and then click Edit. **Note: don't click in the square selector.** The corresponding event's type window will pop up. After your event settings are complete, click OK.

The last step is to affiliate the event created with the logical input. In order to do so, tick the square selector and click on insert. **Note: you can associate more than one event to an external trigger as well as creating event sequences. To learn more about it, please read this.**

9.32.1. Normal Logic Inputs

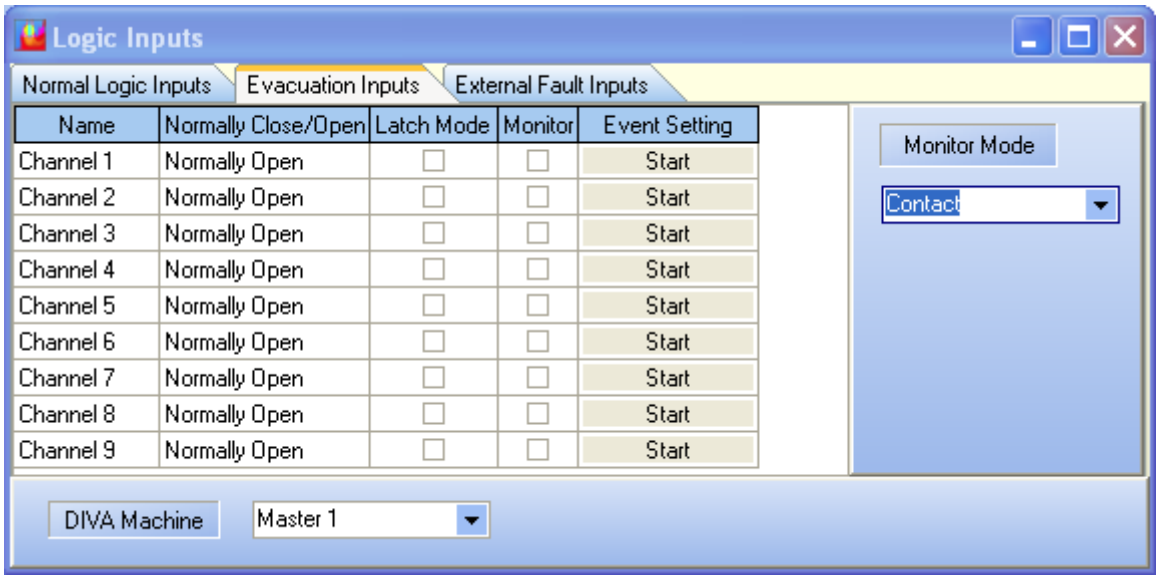
To access the Logic Inputs window, go to the menu View -> Logic Inputs. Then click on the Normal Logic Inputs tab.



- **Name:** Here you can specify a name by simply clicking in the box.
- **Normally Close/Open:** Here you can specify the behaviour of the inputs. Normally closed means that the contact is closed in neutral position and reciprocally normally open means that the contact is open in neutral position.
- **Latch Mode:** By ticking this option you will set the contact to be in latch mode. It means that you will need on trigger to open/close the contact and one more trigger to get it back to the neutral position.
- **Event Setting:** By clicking start you will be able to associate an event to this input.

9.32.2. Evacuation Inputs

Evacuation input have been design to offer monitoring on logical inputs as well as UGA mode, even though they can be used as normal logic inputs, in order to provide an higher security level for external trigger.



- **Name:** Here you can specify a name by simply clicking in the box.
- **Normally Close/Open:** Here you can specify the behaviour of the inputs. Normally closed means that the contact is closed in neutral position and reciprocally normally open means that the contact is open in neutral

position.

- **Latch Mode:** By ticking this option you will set the contact to be in latch mode. It means that you will need on trigger to open/close the contact and one more trigger to get it back to the neutral position.v
- **Monitor:** By ticking this option in contact or UGA monitoring mode, you will define an input as a monitored logical input.
- **Event Setting:** By clicking start you will be able to associate an event to this input.
- **Monitor Mode:** With the drop down menu, you can choose between contact monitoring mode or UGA mode. Contact monitor mode implies the use of an resistor network on a contact, see How To Create a Monitorable Button. The UGA mode is based on polarizing the input with an external 24VDC source provided by external devices.

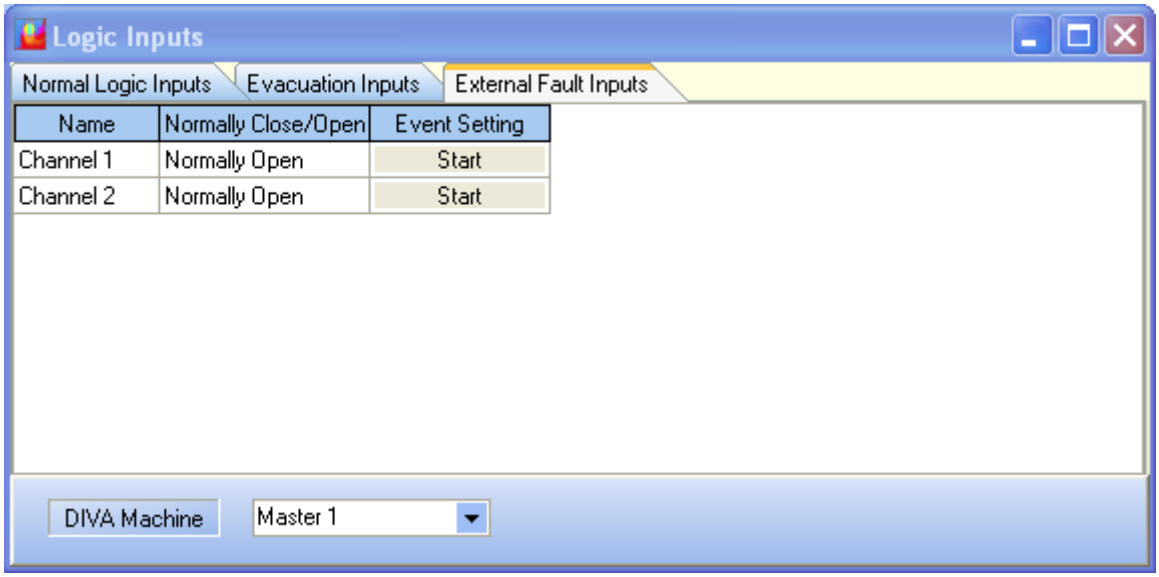
Note: The UGA mode is an alternative way of using contact. It does not offer real monitoring behaviour and does not increase security.

9.32.3. External Fault Inputs

As explained before, the External fault Inputs have been implemented in order to offer the possibility to force DIVA to enter his security mode. For more information about security mode, please read this.

The external trigger of those inputs should come from security devices such as security power supply. You can also use those input to force DIVA into the security mode in order to save energy during night.

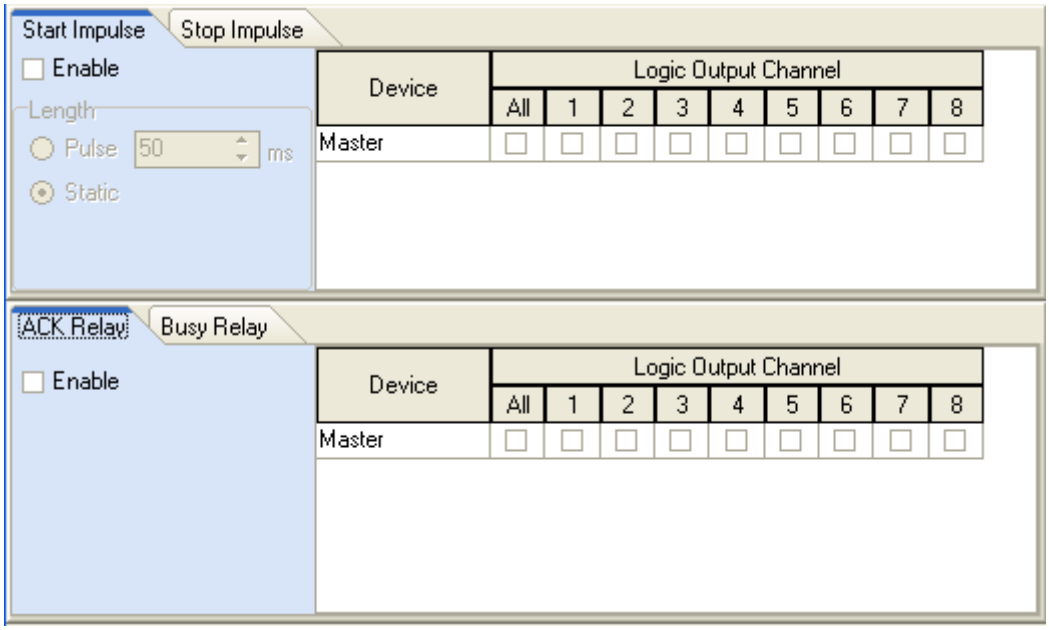
Like any of the logic inputs, you can associate an event to External Fault Inputs.



- **Name:** Here you can specify a name by simply clicking in the box.
- **Normally Close/Open:** Here you can specify the behaviour of the inputs. Normally closed means that the contact is closed in neutral position and reciprocally normally open means that the contact is open in neutral position.
- **Event Setting:** By clicking start you will be able to associate an event to this input.

9.33. Use Output Relay

In some event windows of DIVA software, you will have the possibility to set an action for output relay and /or to enable busy relay or acknowledgement relay. Referring to the picture below, the upper squares are for output relay activation and the lower squares for acknowledgement and busy relay states.

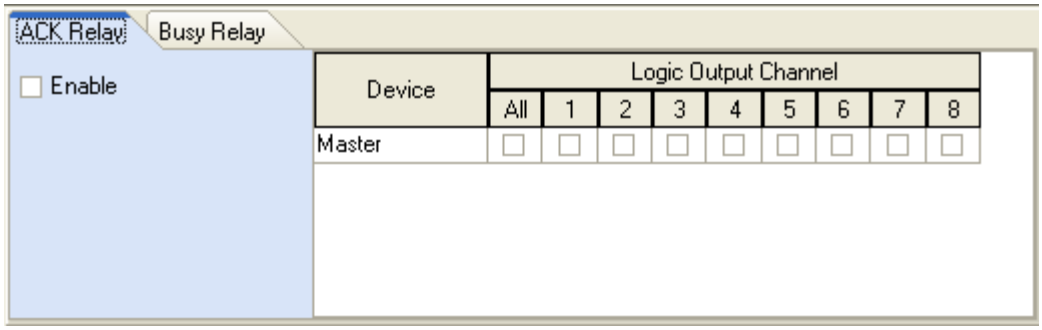


Note: DIVA Master and Slave offer 8 output relay each. Keep in mind that one relay can only rely to one action. Multiple activation of output relay is not possible.

9.33.1. Acknowledge Relay

The purpose of the Acknowledge relay is to indicate to persons that the event is active. Trying to call in a zone where a higher priority event is active will result in a refusal of that call in this zone. The acknowledge relays will keep you aware of that by being not active.

The acknowledge relay can be set in all event setting window, follow the next steps to activate and set an acknowledge relay.



- Tick the check box in order to enable the acknowledge relay option.
- Select on each device (master and/or slaves) the output channel that will be used as acknowledge relay contact. Note: multiple output channel can be selected for an event.

9.33.2. Busy Relays

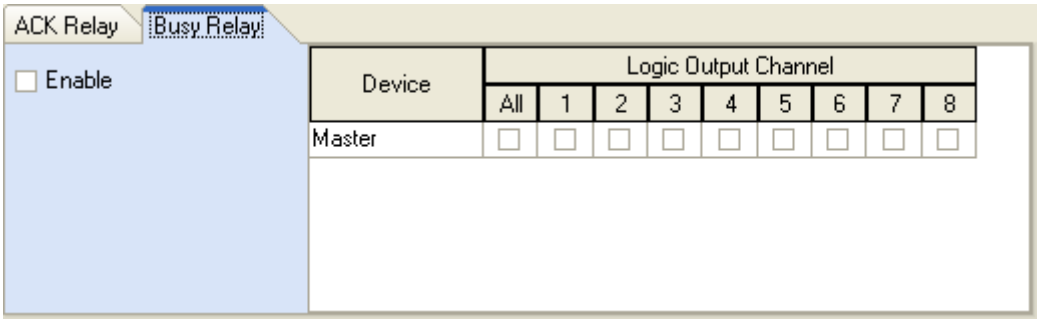
The busy relays have been made to inform user that there is already an higher priority event active in at least on zone of the event. The lower priority event won't be able to start in "cancel all" mode and can be started in non-common zone in "coexist" mode.

In order to make it clearer, here is an example.

- Event 1: play message, priority 4, busy relay CH1
- Event 2: play message, priority 1

When Event 2 is active, the output relay CH1 is active. It informs that an higher priority event is active and that Event 1 wont' be played or partially be played if it is activated.

The Busy relay can be set in all event setting window, follow the next steps to activate and set an Busy relay.

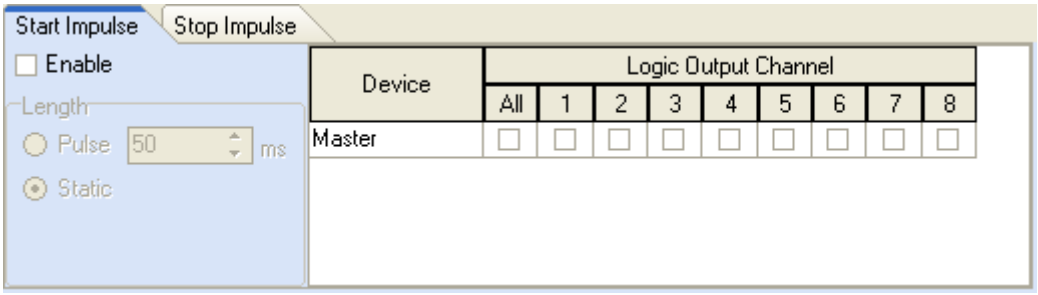


- Tick the check box in order to enable the busy relay option.
- Select on each device (master and/or slaves) the output channel that will be used as busy relay contact. Note: multiple output channel can be selected for an event.

9.33.3. Active at Start Relays

The Active at Start relay, named start impulse, will allow the activation of an output channel when an event is started.

The start impulse relay can be set in all event setting window, follow the next steps to activate and set an start impulse.

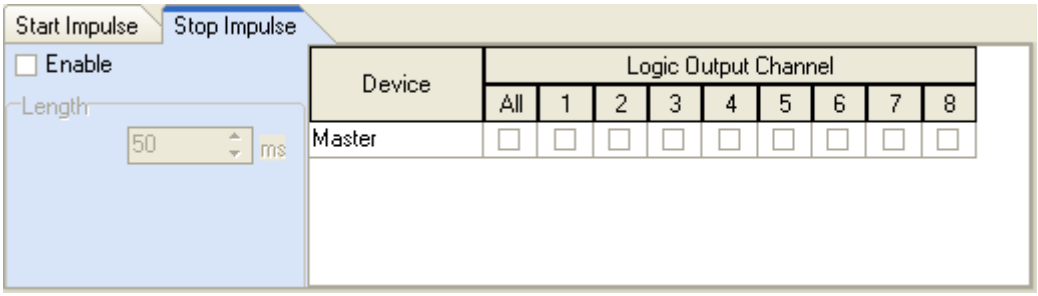


- Tick the check box in order to enable the start impulse option.
- Choose between the pulse mode or static mode. Pulse mode will generate a contact pulse for the time set, range from 50ms to 60000ms. Static mode will activate the output contact for the entire duration of the event.
- Select on each device (master and/or slaves) the output channel that will be used as Start Impulse contact. Note: multiple output channels can be selected for an event.

9.33.4. Active at Stop Relays

The Active at Stop relay, named Stop Impulse, will allow to activate an output channel when an event is stopped.

The stop impulse relay can be set in all event setting window, follow the next steps to activate and set an Active at Stop relay.



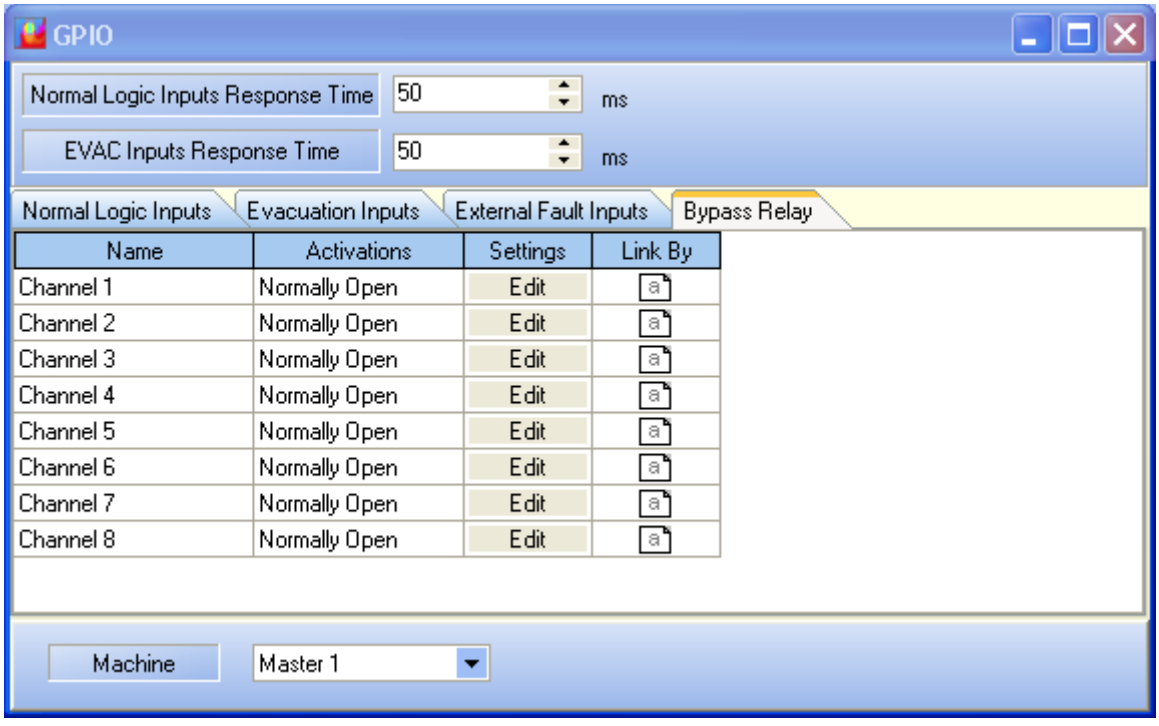
- Tick the check box in order to enable the relay.
- Set the contact pulse length, range 50ms to 6000ms.
- Select on each device (master and/or slaves) the output channel that will be used as Start Impulse contact.
  Note: multiple output channels can be selected for an event.

9.33.5. Use Bypass Relay

The bypass relays are independent of events. The goal of bypass relay is to close/open a relay when some zone(s) are occupied with a type of source.

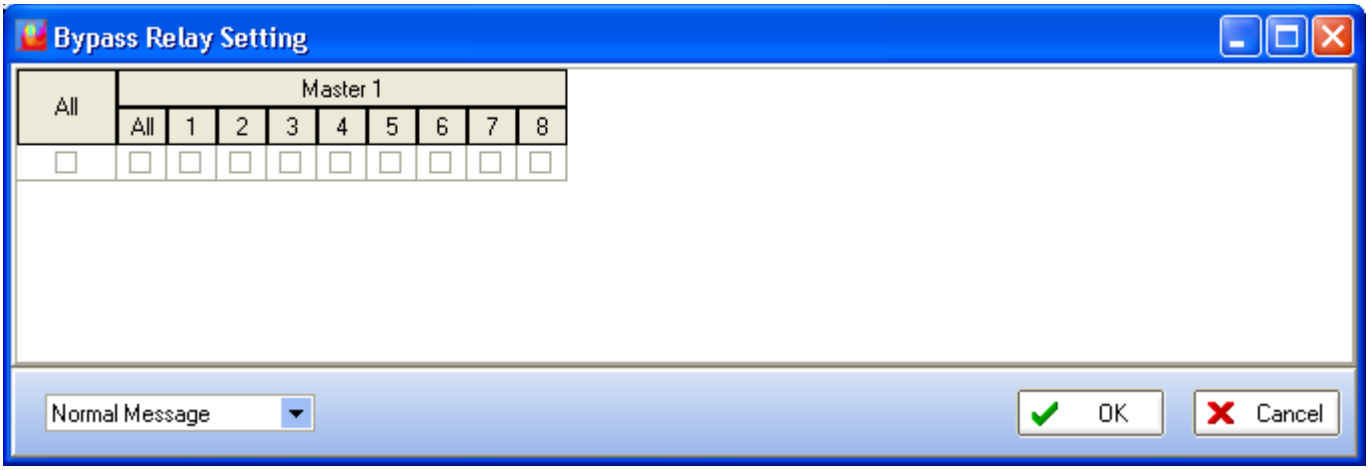
In order to set a bypass relay, follow the next few steps:

- Go in menu View -> GPIO -> Bypass Relay tab



Channel 1 to 8: correspond to the output channel.
Activations: specify if the contact will be closed when active or opened when active.
Settings: by clicking on the edit button, you will enter the zone/source matrix.
Link by: by clicking the "a" icon, it will open a display in which you will find the CH X already existing trigger (Bypass, Busy, Acknowledge, Active at start or active at stop relay).

- Click on the Edit button of the channel you want to use as a bypass relay, the following matrix window will pop up, see below:



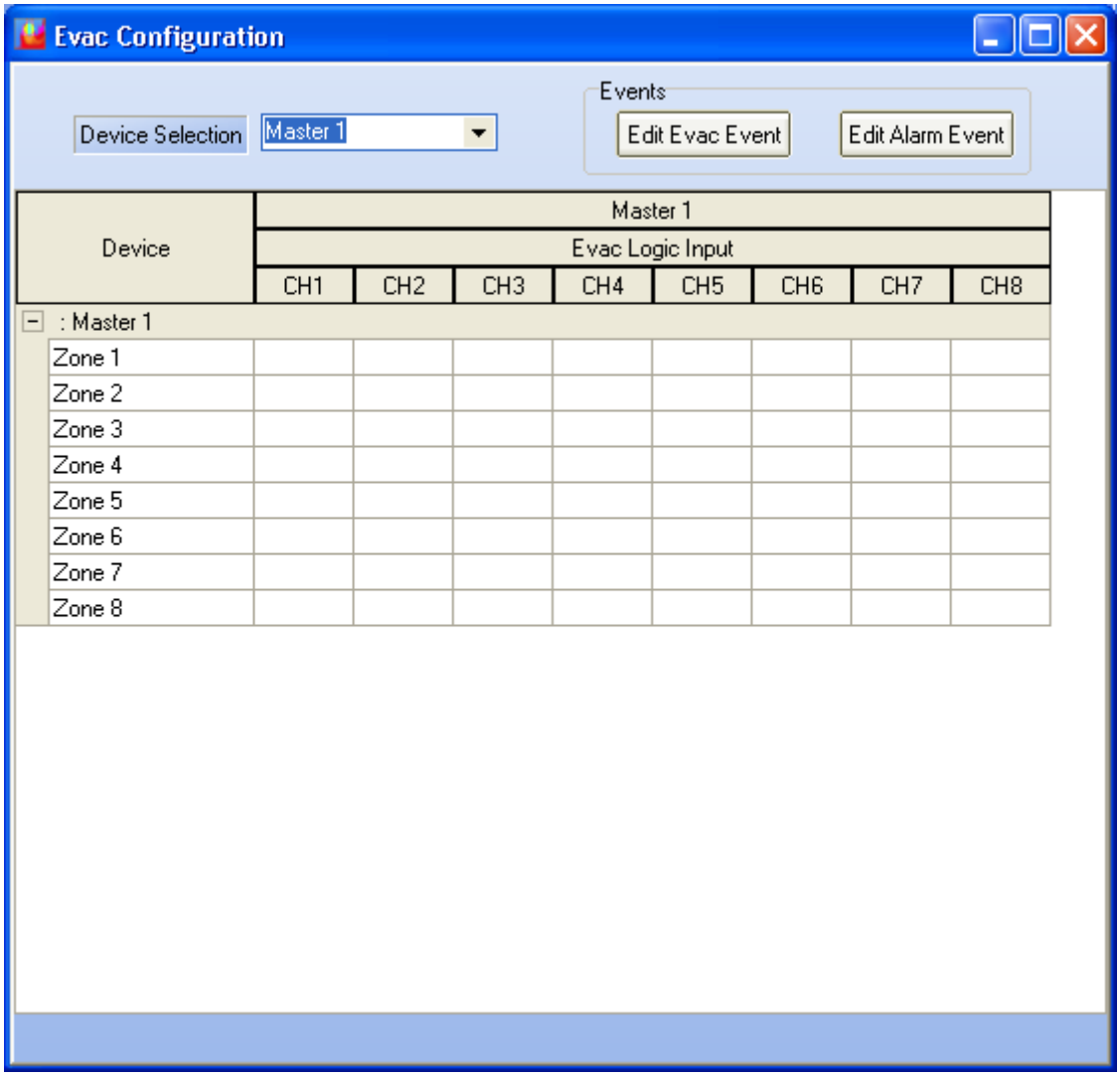
- With the bottom left drop-down menu, you will be able to specify for each source type (Music 1, Music 2, Normal message, Evac message, PSS) the zone in which the source has to be routed to activate the relay.
- Click OK to validate.

Note: for each of the 8 output relays, you can specify multiple zone-source routing for the relay activation.

9.34. Do Phase Evacuation (Evac Configuration)

Using the Evac configuration setup allows you to easily designed phase evacuation or any evacuation scheme.

To access the Evac Configuration matrix, please go in the menu View -> Evac Configuration. The Evac configuration window should pop up.



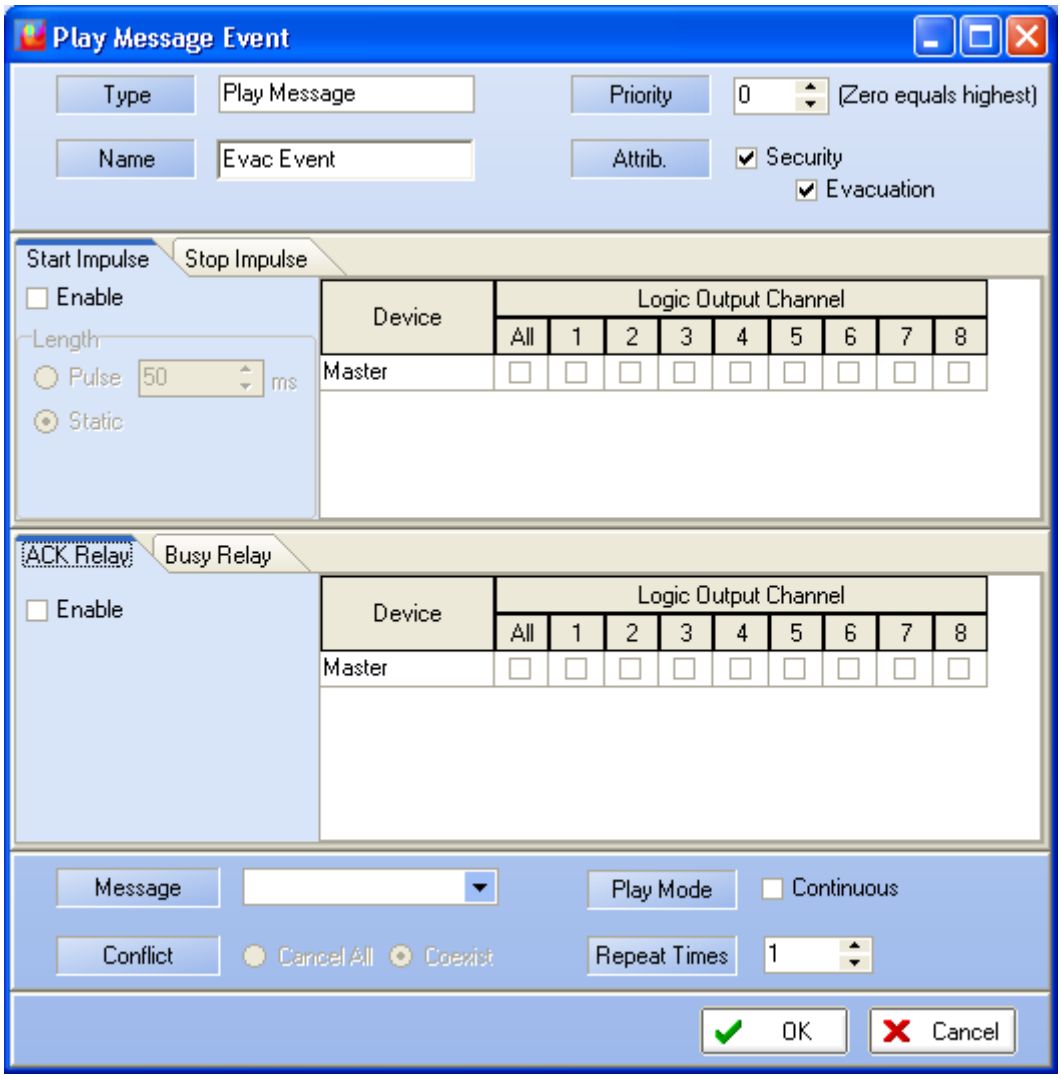
The purpose of the Evac configuration is to use 2 different play message events (Evac and Alarm) and to use them with Evacuation input in order to create phase evacuation.

Events:

When using Evac configuration option, you will have to create two dedicated play message events (Evac and Alarm).

Edit Evac Event: allows the creation of the evacuation "play message" event.
Edit Alarm Event: allows the creation of the alarm "play message" event.

Once one of this button is pressed the following event edit window is opened.



- **Type:** display the type of event you are creating
- **Name:** here you can specify a name for the event created. Default is Event X
- **Priority:** here you can adjust the priority of the event. 20 is the lowest, 0 is the highest
- **Attrib:** here you can specify if this event is a security one or not and if it is an evacuation event or not. See Common Option to learn more about the security option

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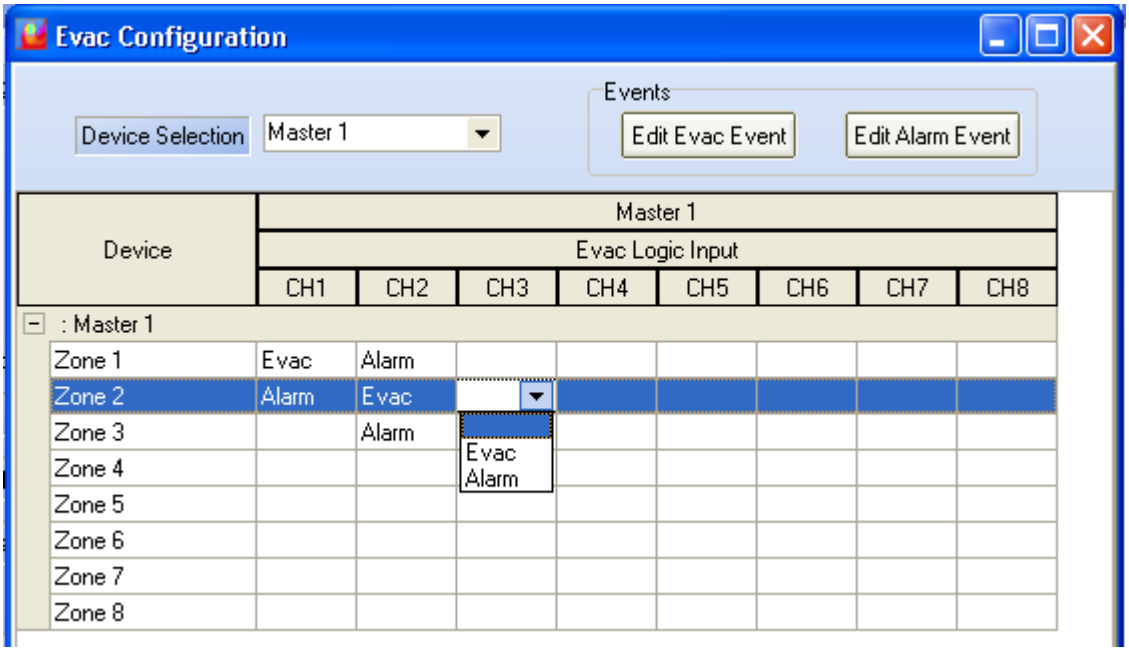
- **Start Impulse:** Ticking this option allows user to close an output contact (Logic Output channel) in two different manner. Static will close it until the event stop and Pulse will generate a closing pulse whose length can be defined from 50 to 60000 ms.
- **Stop Impulse:** This option is used to create a closing contact pulse when the event is finished. The length of the pulse can be defined from 50 to 60000 ms.
- **ACK Relay:** you can specify here an logic output channel that will be closed when the event is active..
- **Busy Relay:** here you can specify an Logic Output Channel relay that will be closed as soon as a higher priority event is active in one of the pre-define zones.

Set the play message event option to suit your needs.

The bottom part of the Evac Configuration form is dedicated to create the phase evacuation. After having enabled an evacuation input, you have to define in which zones the messages will be played.

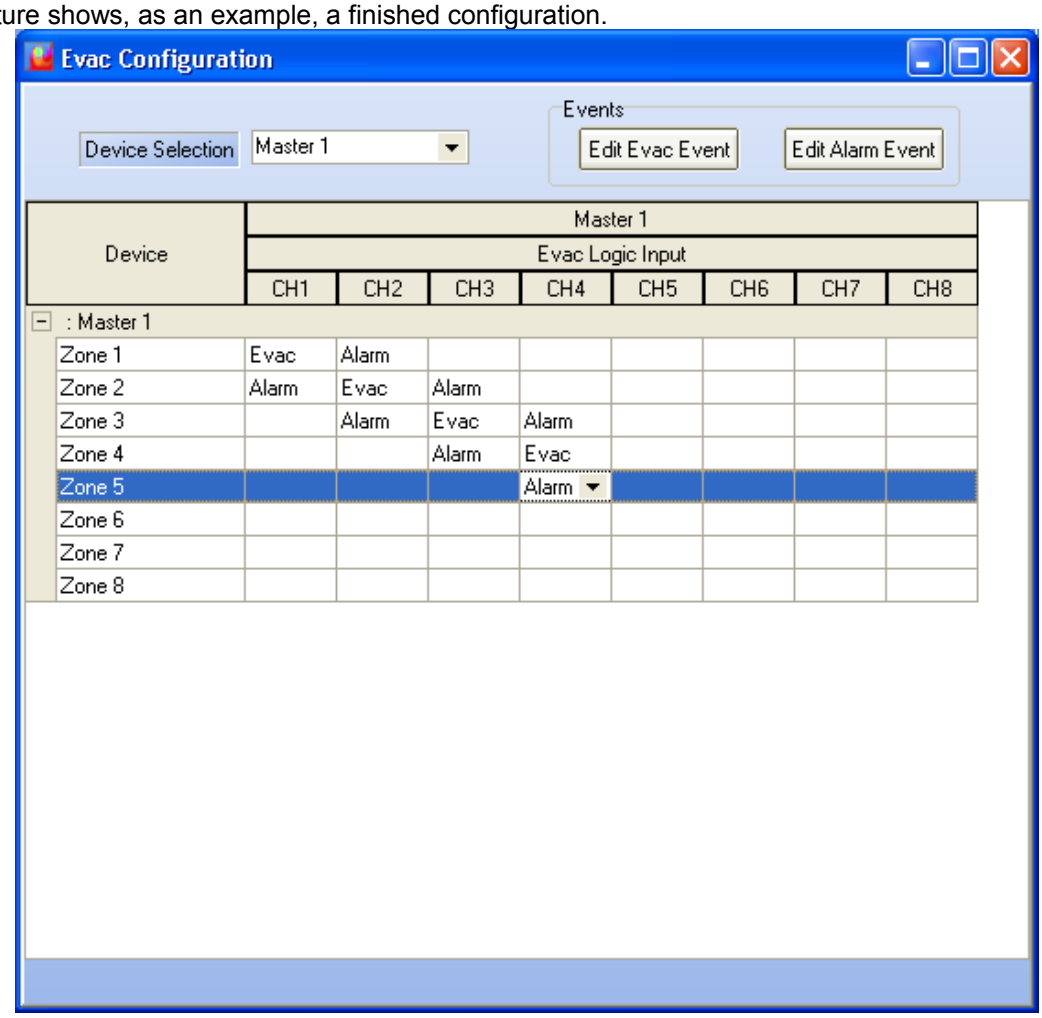
- For each evacuation input (CH1 to CH8), select the routing of Evac event and Alert event by clicking into the boxes, see next picture



- Define the corresponding Evacuation Input activation mode, see chapter "How to Evacuation Inputs"

Note: only eight of the nine DIVA evacuation input are accessible from the Evac Configuration option. The ninth evacuation input is reserved for evacuation reset.

The next picture shows, as an example, a finished configuration.

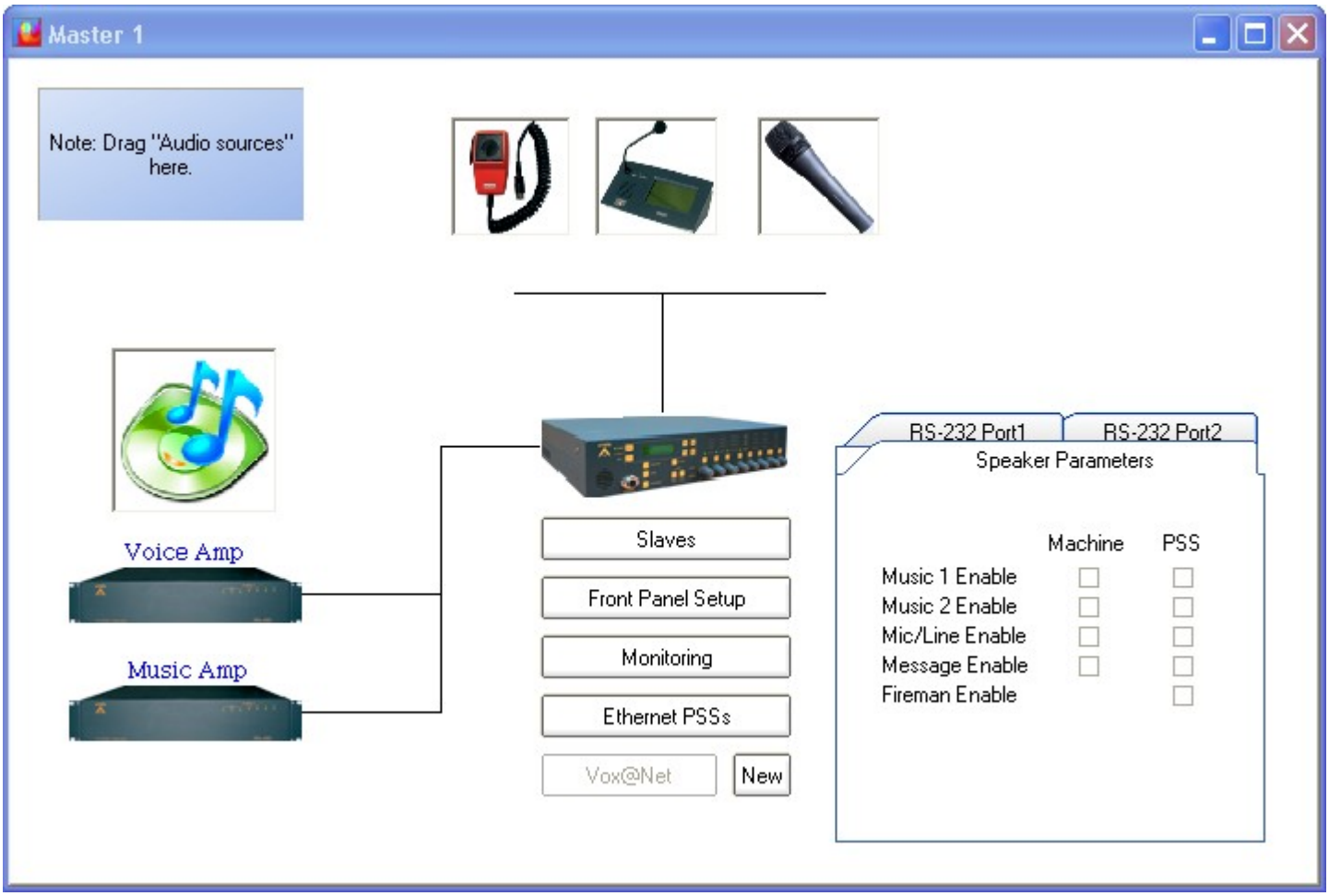


The configuration above will act as follow:

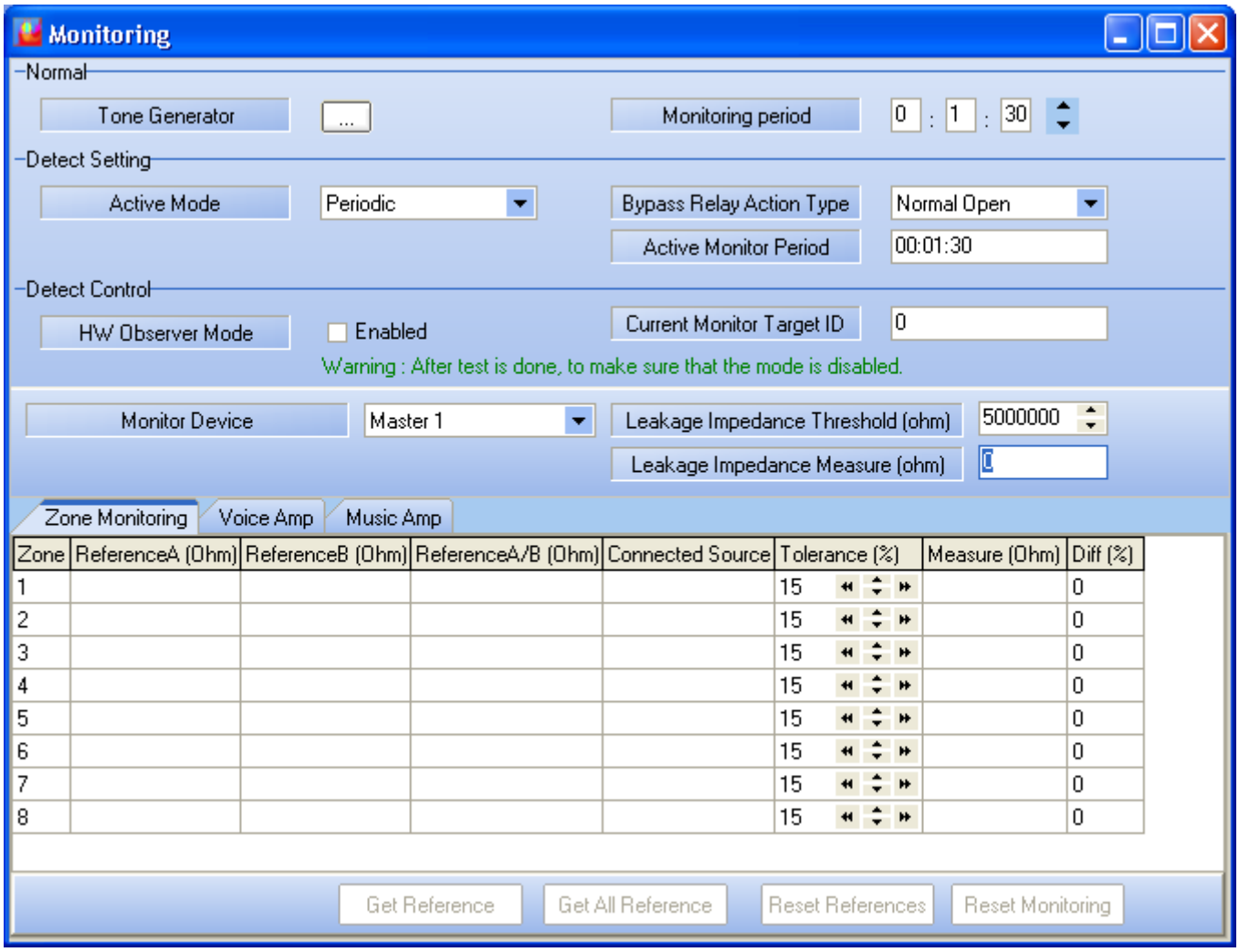
- Evacuation Input 1 (CH1) activated: the Evac message is played in zone 1, Alert message in zone 2
- Evacuation Input 2 (CH2) activated: if CH1 still active, the Evac message is played in zone 1 and 2, Alert message is played in zone 3.
- Evacuation Input 3 (CH3) activated: if CH1 and Ch2 still active, the Evac message is played in zone 1, 2 and 3, Alert message is played in zone 4.
- Evacuation Input 4 (CH4) activated: if CH1, CH2 and Ch3 still active, the Evac message is played in zone 1, 2, 3 and 4, Alert message is played in zone 5.

9.35. Use Monitoring

In order to access and activate zones monitoring and/or amplifiers monitoring, click on the monitoring button under DIVA icon in the master window, see below.



The monitoring window is then opened, see below.



General options:

Normal:

- **Tone Generator**: access the tone generator window, please see how to use the tone generator.
- **Monitoring Period**: if front knob attenuators are in use and if the attenuation value is -16 or -20 dB, the monitoring for accuracy purposes will only occur every Monitoring period. By default, this option is set to 90s. Be carefull that for standard compliancy, this setting should be manipulate with care and in accordance to standard.

Detect Setting:

- **Active Mode**: there are two options for the monitoring process: "Periodic" and "Only once a day". In order to comply with EN54 standards, the monitoring active mode should only be Periodic. If the "Only once a Day" option is chosen, you have to specify at what time the monitoring process will be activated with the "Active Monitor Period".
- **Bypass Relay action**: you can specify the bypass relay activation type.
- **Active Monitor period**: day time where the monitoring "Only once a day" will take act.

Detect Control:

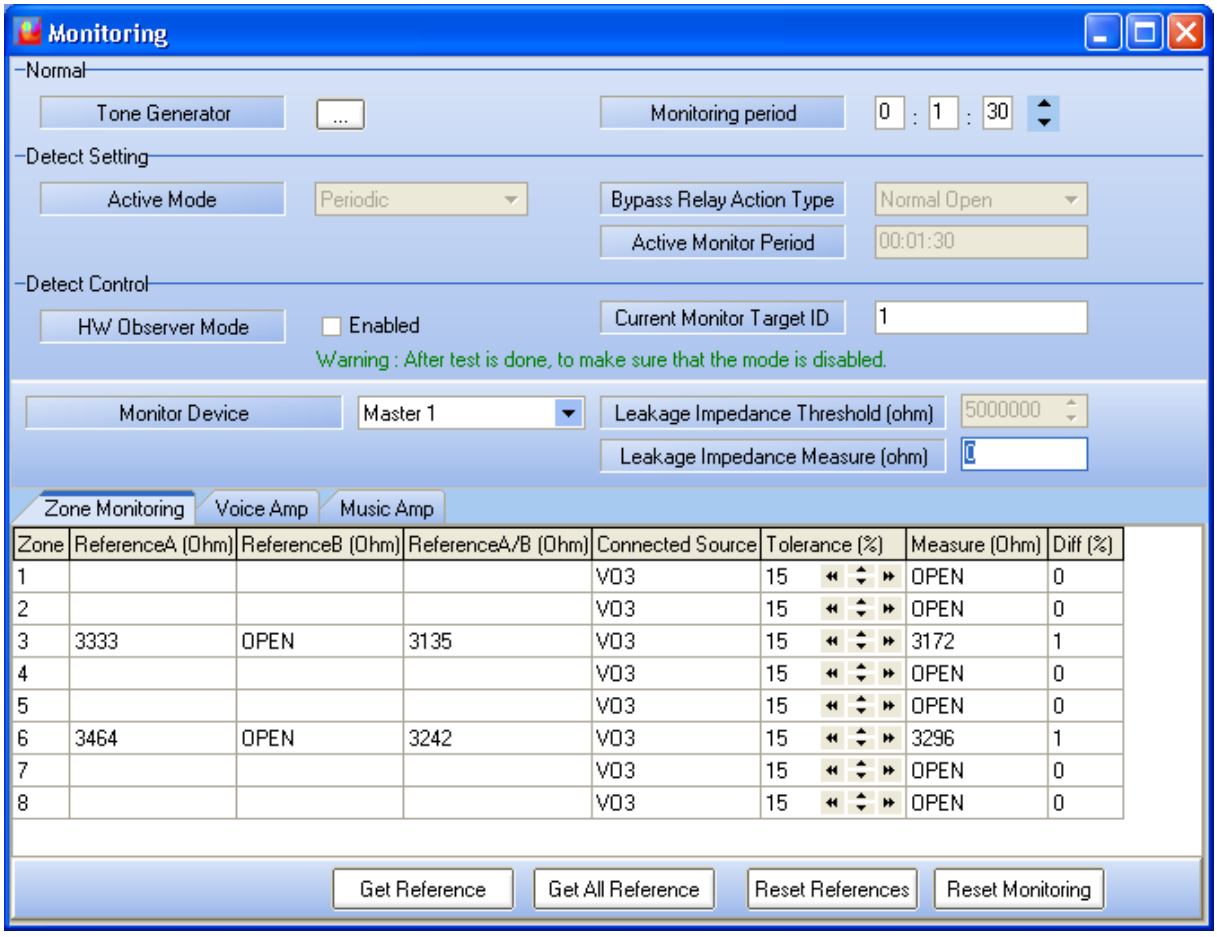
- **HW Observer Mode:** If enabled, this options in combination with the "Monitor device" drop-down menu allows to block the monitoring process on one device. This option has been designed only for commissioning and

maintenance purposes. **Warining:** as soon as maintenance tests are finished, you have to disable the "HW Observer Mode" option.

- **Current Monitor Target ID**: displays the current monitored device. In "Periodic" monitoring mode, you should see the display going from Master DIVA to each Slave unit. In "HW Observer Mode", you should only see the device selected with in "Monitor device" drop-down menu.
- **Monitor Device:** drop-down menu allowing to display references for the different devices in the system (master and slaves).
- **Leakage Impedance Threshold (Ohm):** here you can specify in Ohms, the leakage impedance threshold. By default, the leakage impedance threshold is set to 5MOhm. In old buildings, sometimes this threshold has to be be adjusted.
- **Leakage Impedance Measure (Ohm):** displays the current leakage impedance value.

To learn more about how the monitoring is perform, please read Explanation About Monitoring Process.

9.35.1. Zone Monitoring



Zone	ReferenceA (Ohm)	ReferenceB (Ohm)	ReferenceA/B (Ohm)	Connected Source	Tolerance (%)	Measure (Ohm)	Diff (%)
1				VO3	15	OPEN	0
2				VO3	15	OPEN	0
3	3333	OPEN	3135	VO3	15	3172	1
4				VO3	15	OPEN	0
5				VO3	15	OPEN	0
6	3464	OPEN	3242	VO3	15	3296	1
7				VO3	15	OPEN	0
8				VO3	15	OPEN	0

Zone Monitoring display:

- **Zone:** displays the zone number
- **ReferenceA (Ohm):** displays the value taken as reference for line A of one zone
- **ReferenceB (Ohm):** displays the value taken as reference for line B of one zone
- **RefereneA/B (Ohm):** displays the value taken as reference for A and B in parallel
- **Connected Source:** display the source connected to one zone (Voice Amplifier, Music Amplifier, VO3)
- **Tolerance (%):** here you can specify the tolerance wherein measurement has to stay before generating a fault state
- **Measure (Ohm):** displays the real time measurement of A and B in parallel
- **Diff (%):** displays the difference in percent between Reference A/B and Measure

Zone Monitoring Controls:

- **Get Reference:** this button start the get reference process for one zone at a time
- **Get all Reference:** this button start the get reference process for all zone
- **Reset Reference:** this button allows to reset all reference stored
- **Reset Monitoring:** this button allows to reset the monitoring in case of maintenance
- **Tone Generator:** this button allows to set the tone generator settings. You can learn more about tone generator by reading this.

Procedure to make references for one zone, please follow the next steps:

- Select a zone by clicking on the corresponding line
- Press the "Get Reference" button
- Choose a tolerance value

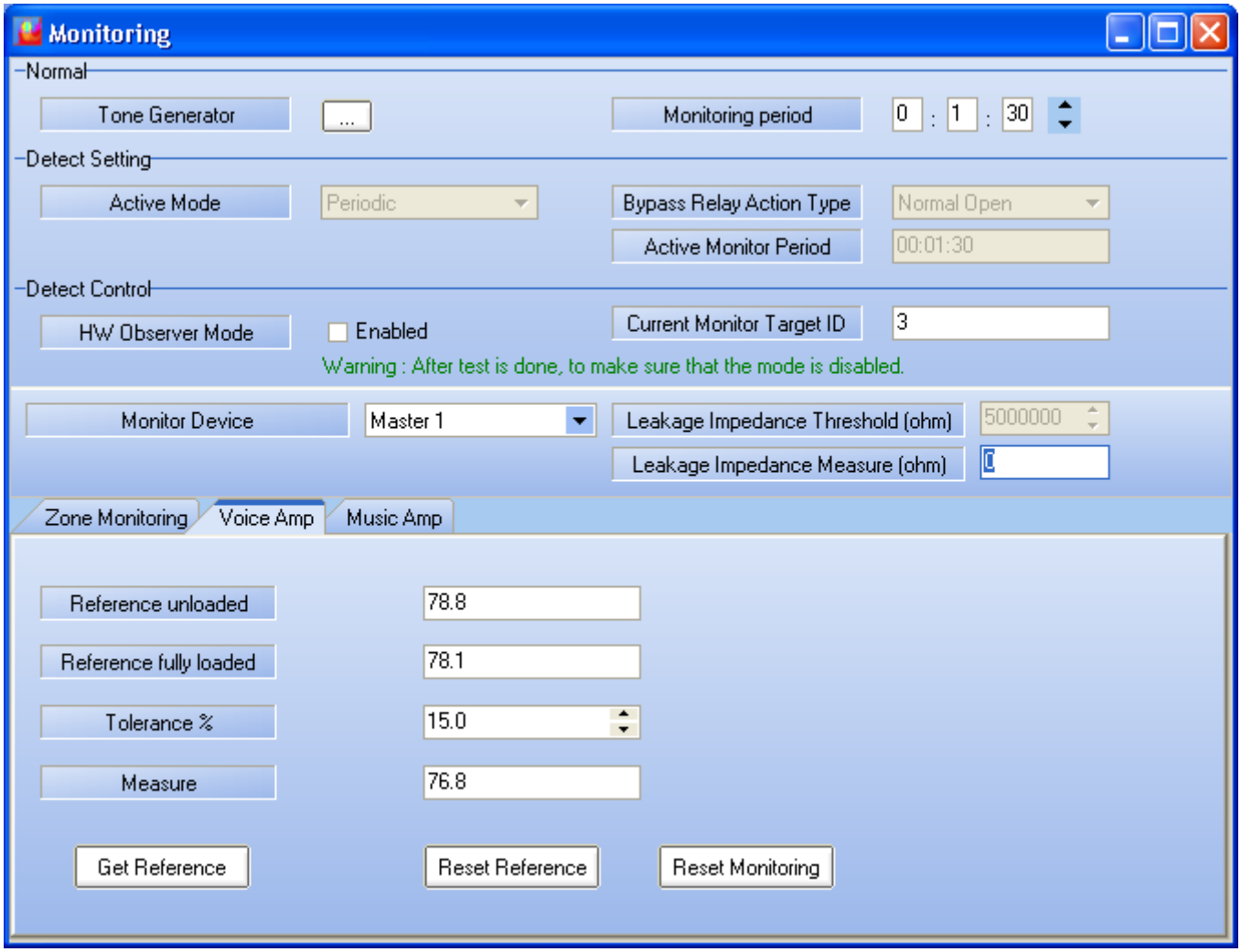
Procedure to make references for all zone, please do so:

- Press the "Get All Reference"
- Choose a tolerance value for each zone

Note: References should be taken only on zone with speaker line connected.

9.35.2. Amplifier Monitoring

The amplifier monitoring tabs are separated for music and voice amplifier, however controls and displays are identical. This is why only the voice amplifier monitoring will be presented.



Amplifier Monitoring display:

- **Reference unloaded:** displays the reference taken as open line gain
- **Reference fully loaded:** displays the reference taken as charged line gain
- **Tolerance %:** here you can specify the value of the tolerance wherein measurement has to stay before generating a fault state
- **Measure:** displays the measure of the amplifier current gain

Amplifier Monitoring Controls:

- **Get Reference:** this button start the get reference process on the amplifier
- **Reset reference:** this button allows to reset all reference stored
- **Reset Monitoring:** this button allows to reset the monitoring in case of maintenance

The gain value are absolute gain. A gain of 100 correspond to a gain of 40 dB.

Procedure to take amplifiers references:

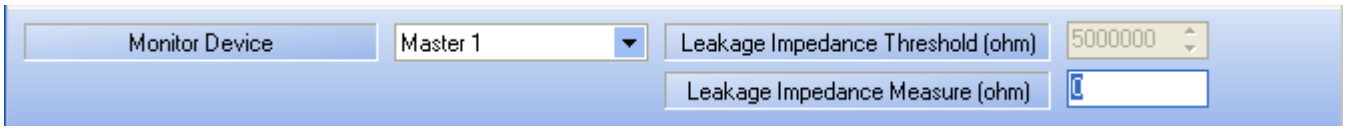
- Press the "Get Reference" button

- Choose a tolerance value

Note: music amp monitoring tab offers exactly the same displays and controls.

9.35.3. Leakage Impedance

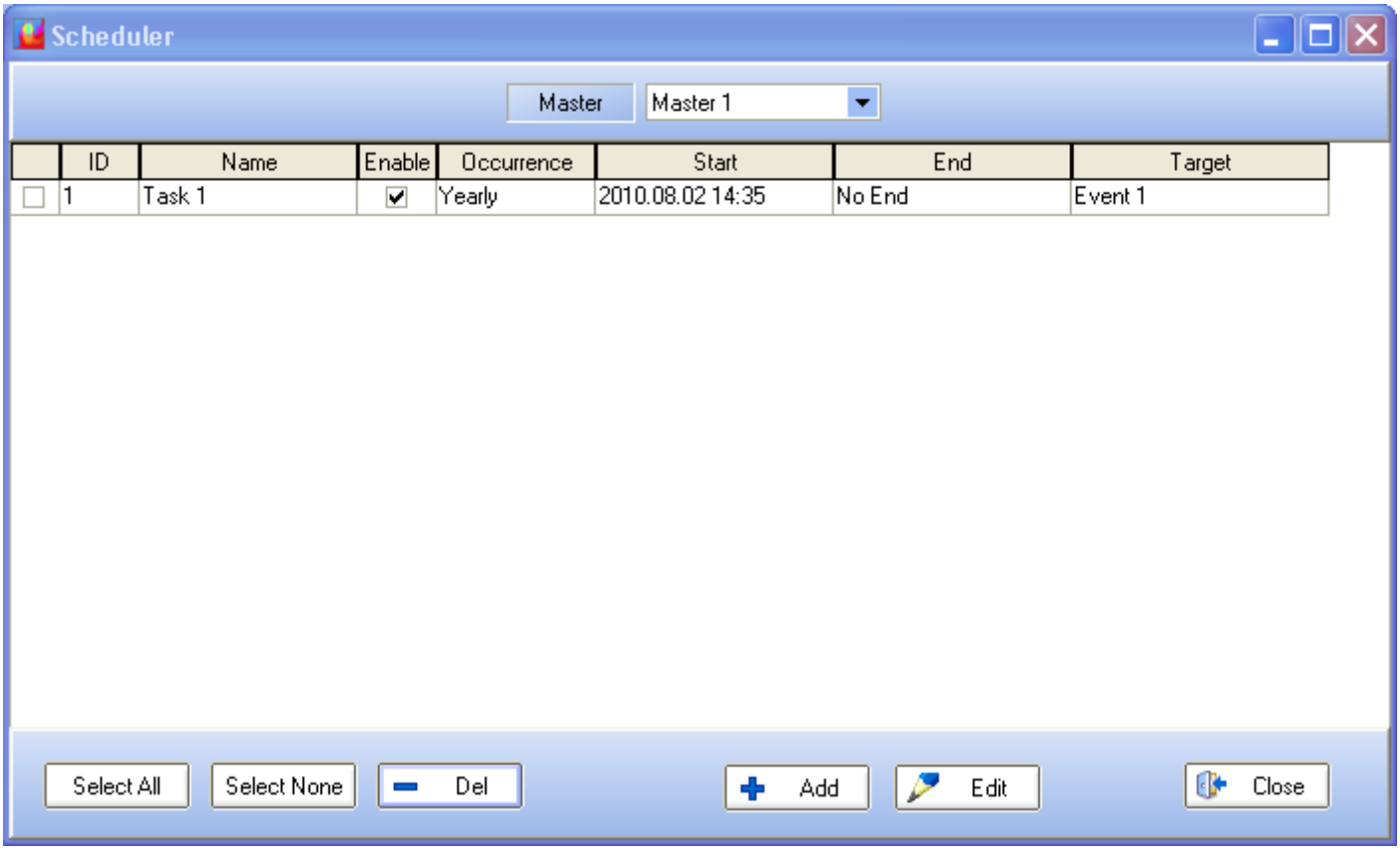
The DIVA8 has a special measurement unit that checks the impedance between the amplifier OdB output and amplifier 100V input. If these impedance goes lower than the value set as threshold, DIVA displays a fault.



- **Leakage Impedance Threshold (Ohm):** here you can specify in Ohms, the leakage impedance threshold. By default, the leakage impedance threshold is set to 5MOhm. In old buildings, sometimes this threshold has to be be adjusted.
- **Leakage Impedance Measure (Ohm):** displays the current leakage impedance value.

9.36. Use the Scheduler

To access the Scheduler window, go on the menu View -> Scheduler. The window below should appear.

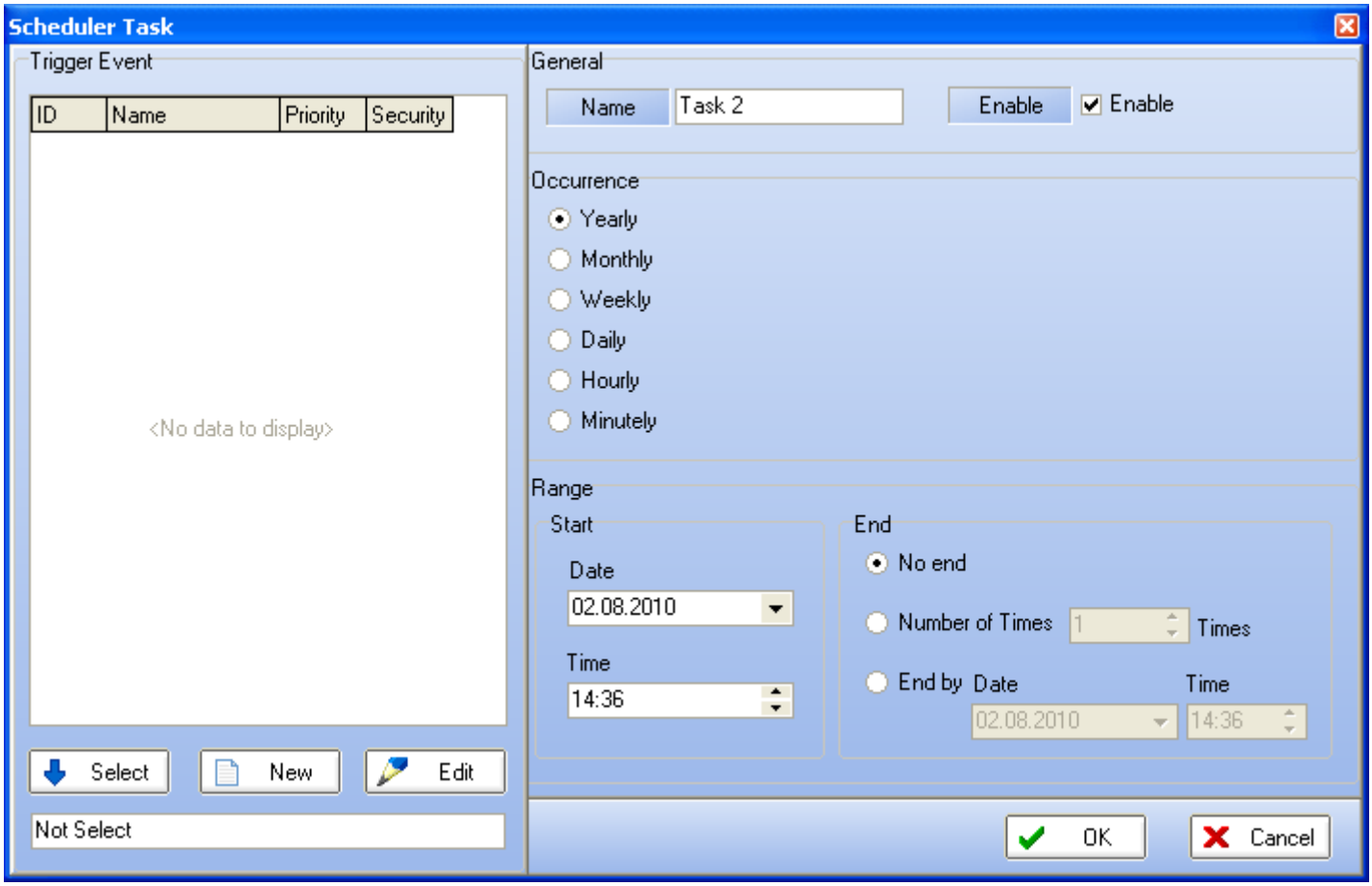


- **Master:** this indicates the device on which the scheduler task will happen.
- **ID:** displays the ID number of the task.
- **Name:** display the scheduler task name. This name can be entered in the scheduler task window.
- **Enable:** indicates if the task is enable or not (ticked means enable).
- **Occurrence:** displays the way the repeat mode has been set for the task.
- **Start:** displays the date and time at which the task starts.
- **End:** displays the date and time at which the task stops. Note: if the task is a Single task, start time and end time will be the same.
- **Target:** display which event is affiliated to the task.

- **Select All:** allows to instantaneously select all the tasks from the list
- **Select None:** allows to instantaneously deselect task selected from the list
- **Del:** allows to delete selected task from the list
- **Add:** allows to add a new task to the scheduler
- **Edit:** allows to edit one task parameters
- **Close:** close the scheduler window.

How to set a task:

To add a scheduler task, click on the Add button in the scheduler window. Then the Scheduler Task window will pops up.



General:

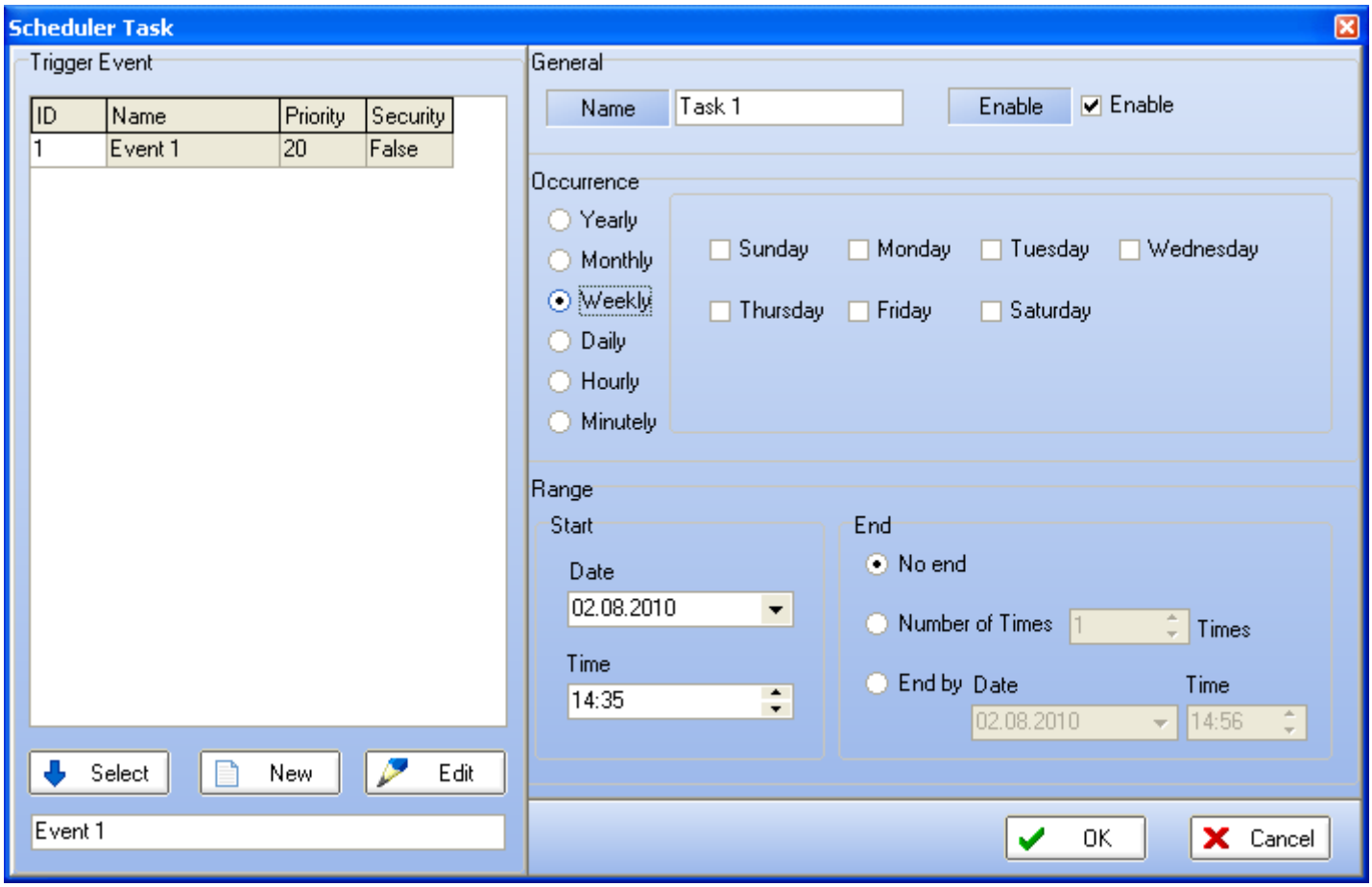
- Specify a name for the task. Default name are Scheduler Task X.
- Tick the “Enable” option in order to make the task available.

Trigger Event:

- In the trigger event, you will find a list of all events that are existing in the current configuration. You can edit one existing event by selecting it in the list and then click the Edit button
- Select one in the list or create a new event. Once the event is selected, click on the select button to affiliate the event to the task that is created
- Select if it is a Single occurrence task or a Cycle task. For Cycle task, see picture below.

Occurrence:

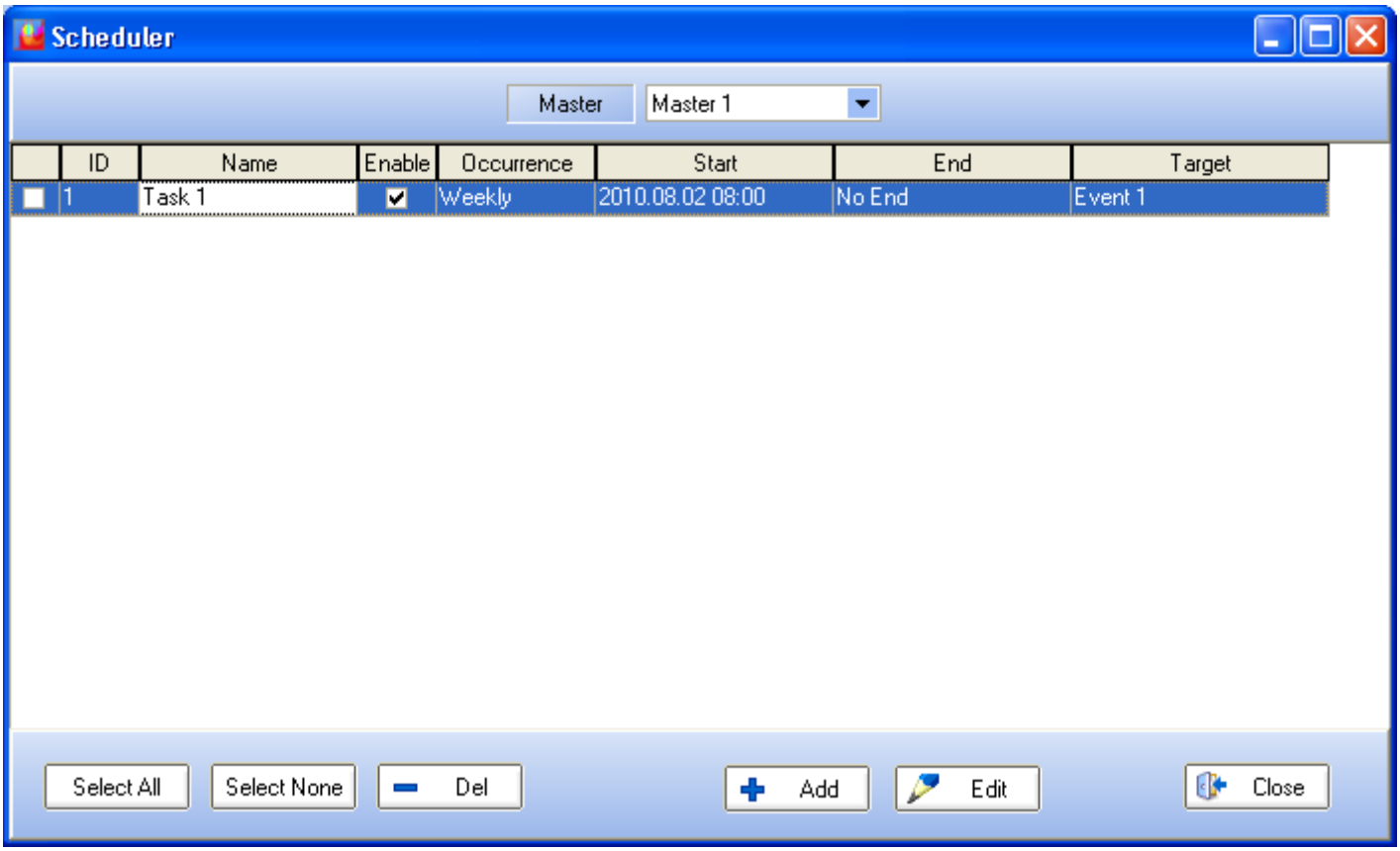
You can choose the way the scheduler task will be repeated. The scheduler offers yearly repeated event, monthly, weekly, daily, hourly and minutely. The weekly option offers days of the week activation options, see below.



- **Range:** here you can specify the date and time for the first occurrence of the scheduler task. You will also specify the way the task will end: no end, end after a certain amount of repeated time or end at a specific date and time.

- To create a scheduler task, follow the next steps:
  - Choose the way the scheduler task will be repeated: every minutes, hour, day, week, month or year. If week, choose the weekday.
  - Set a date and time for the scheduler task.
  - Set the end of the task:
    - No End: task will happen every hour, day, week, month or year from the date and hour selected and will be repeated until the user delete the task.
    - Number of times: task will happen for a certain number of hour, day, week, month or year from the date and hour selected. Example: if set every day, then 3 number of times, the task will happen the first day set and the two next day at the same hour.
    - End by date: task will happen each hour, day, week, month or year for a certain period (can be several hours, days, weeks, etc.). For this option, you will have to specify an end time.
  - Make sure the enable option is ticked.
  - Press OK

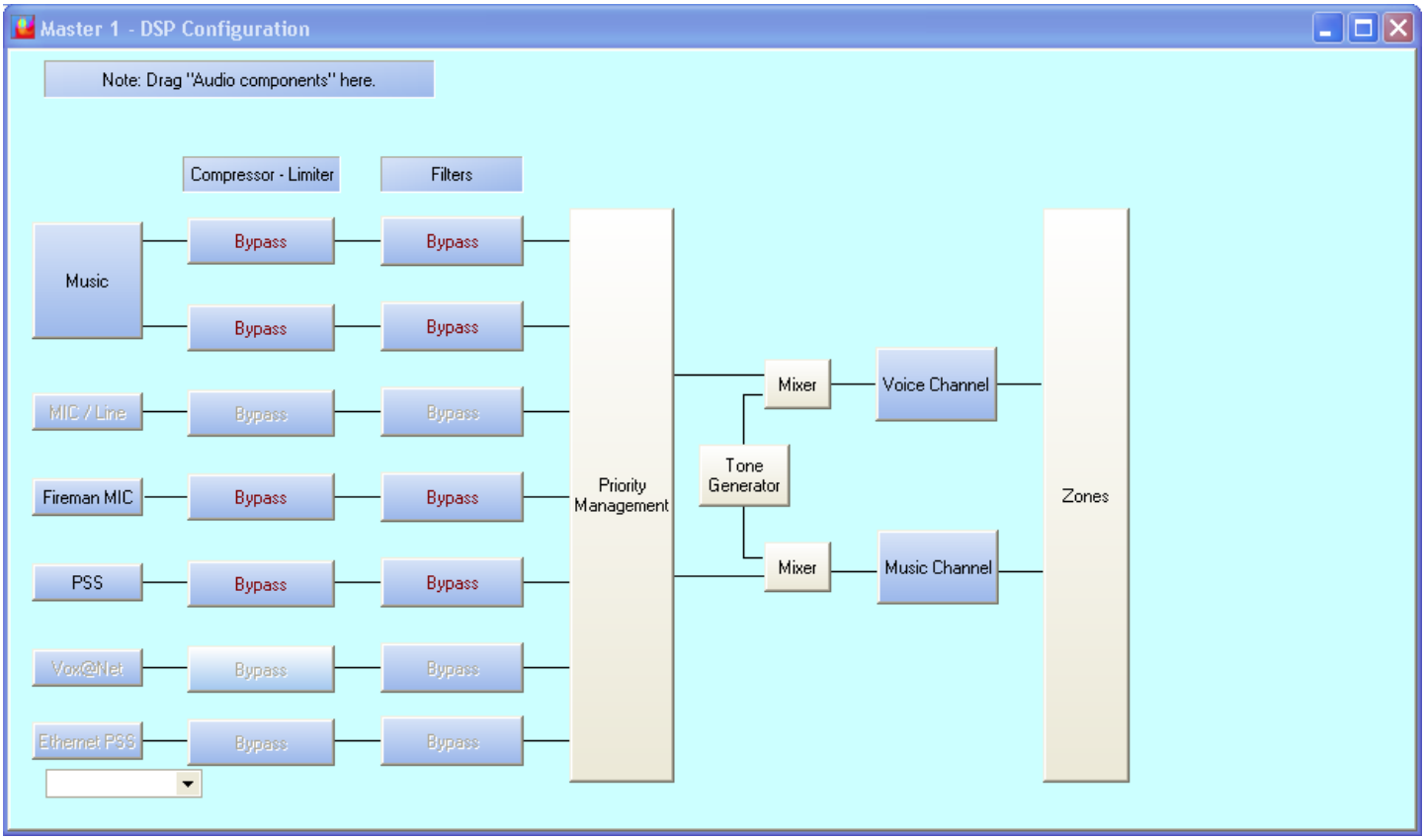
  - Your task will be displayed as follow in the scheduler window.


Scheduler
Master
Master 1
ID
Name
Enable
Occurrence
Start
End
Target
1
Task 1
Weekly
2010.08.02 08:00
No End
Event 1
Select All
Select None
Del
Add
Edit
Close

9.37. Use Filters

On DIVA, you can add hi-pass or low-pass filtering on audio input and on amplifier outputs in order to adjust the frequency range to your needs. To do so, you have to access to the DSP Configuration window.

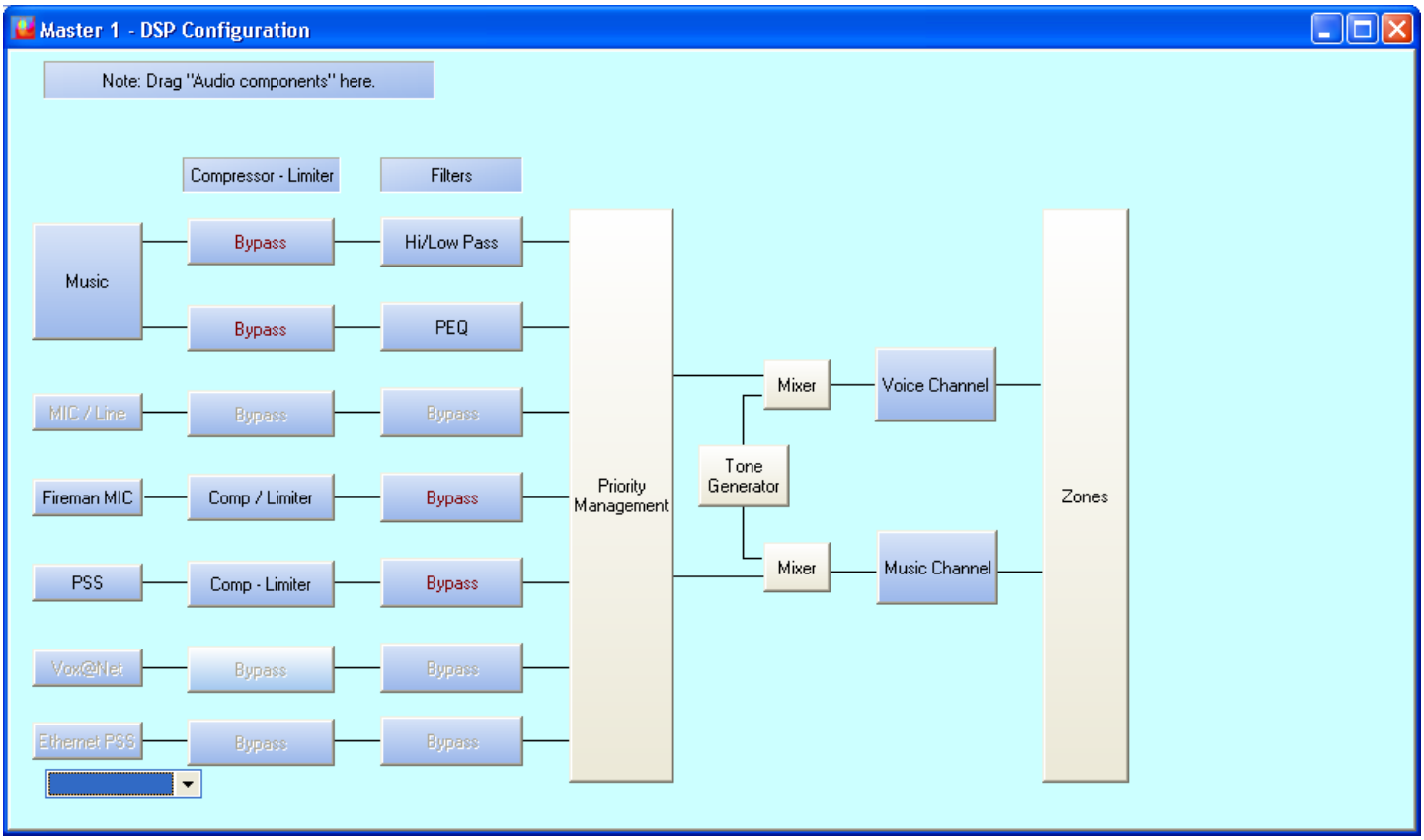
- In the Master window, double-click on the DIVA icon. The DSP configuration window will pop up. Note: if no audio sources have been set into the configuration, the corresponding Filter and Compressor-Limiter location will be greyed.



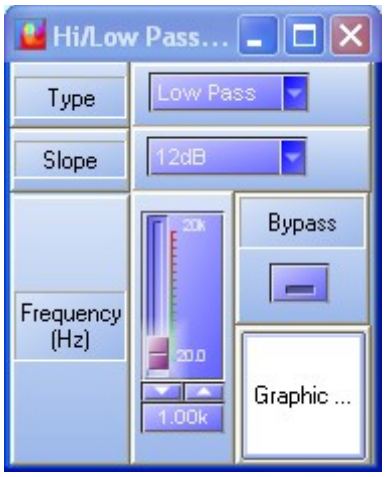
On the left of the DSP Configuration window you can find all audio inputs and on the right amplifier outputs.

9.37.1. On Inputs

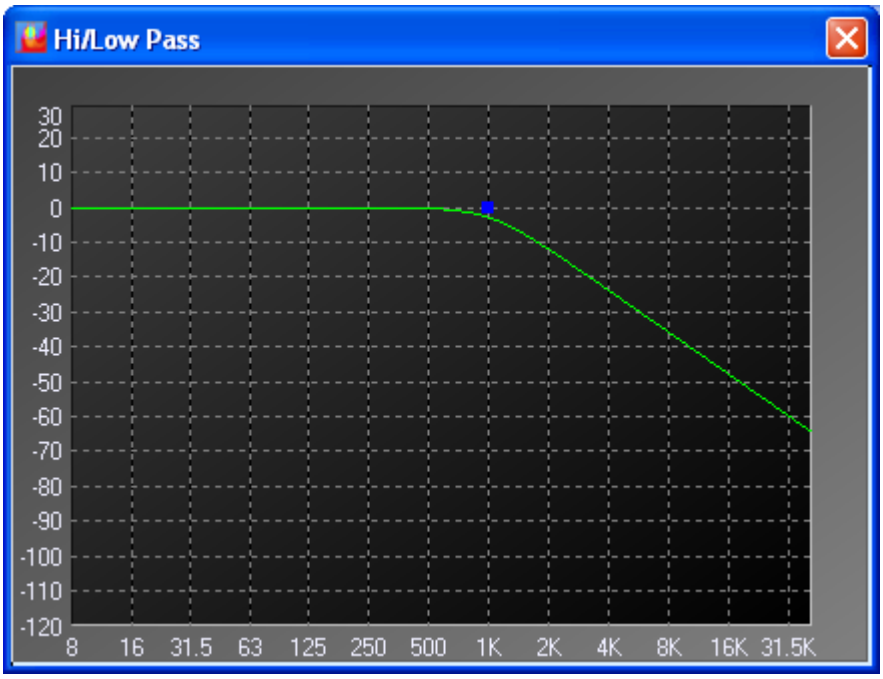
To add high or low pass filter on audio input, drag and drop Hi/Lo Pass filter from the design component section on the Filters location, see picture below. Note: you also can add high and low pass filtering by using the PEQ filter on input, read this.



- Double click on the Hi/Low Pass icon, the Hi/Low pass window pops up (see below).



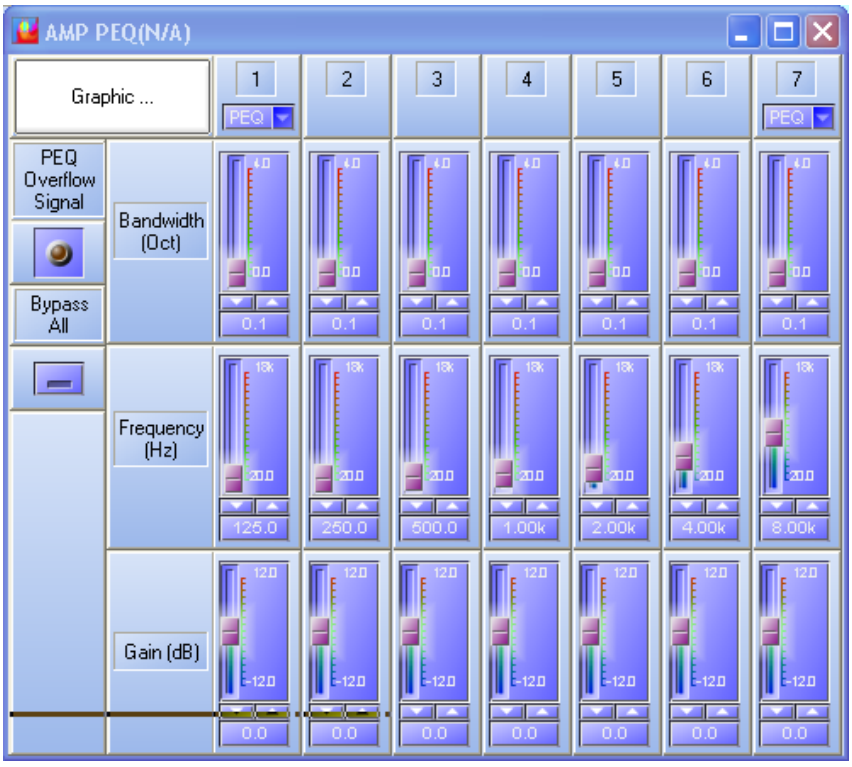
- **Type:** here you can choose the filter type, high pass or low pass.
- **Slope:** here you can specify the slope of the filter (12dB, 24dB or 36dB).
- **Frequency:** here you can specify the filter cutoff frequency by adjusting the slide bar, using arrow keys or writing it directly in the cell.
- **Bypass:** by clicking on the Bypass button, you instantaneously bypass the filter.
- **Graphic:** by clicking on the Graphic button, you will enter the filter graphic edition window, see below. By moving the blue point, you can adjust the cutoff frequency.



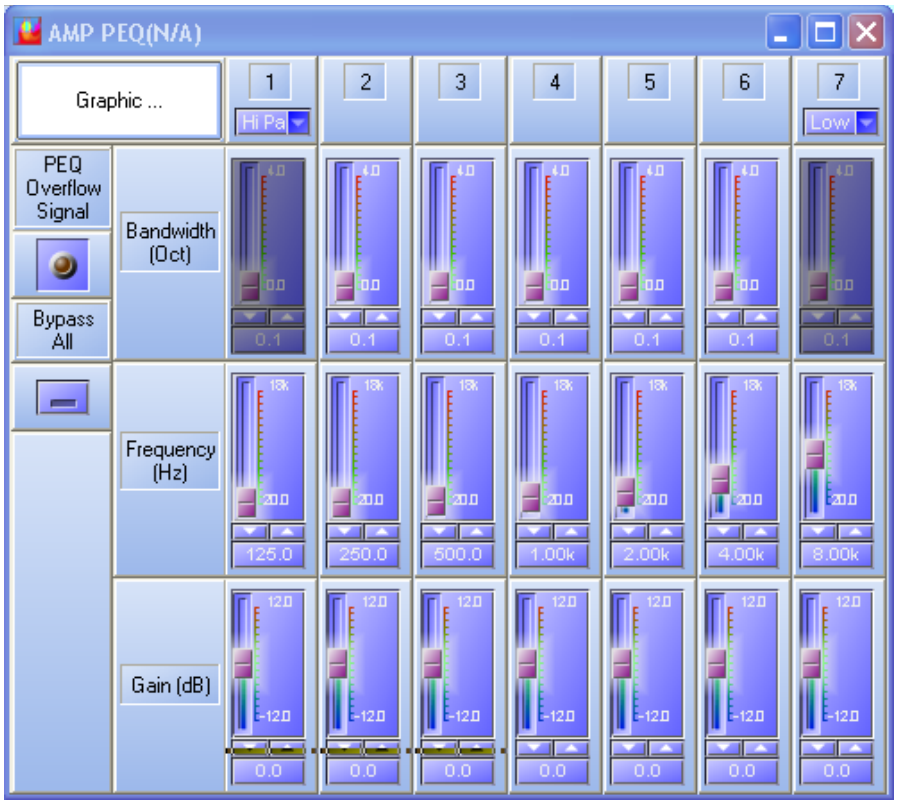
9.37.2. On Outputs

- To add high or low pass filter on audio amplifier outputs, double click on the icon: PEQ Voice Channel or PEQ Music Channel in the DSP Configuration Window. The following window pops up. Note: more explanation about amplifier output PEQ can be found here.
- The follwing window will pop-up:

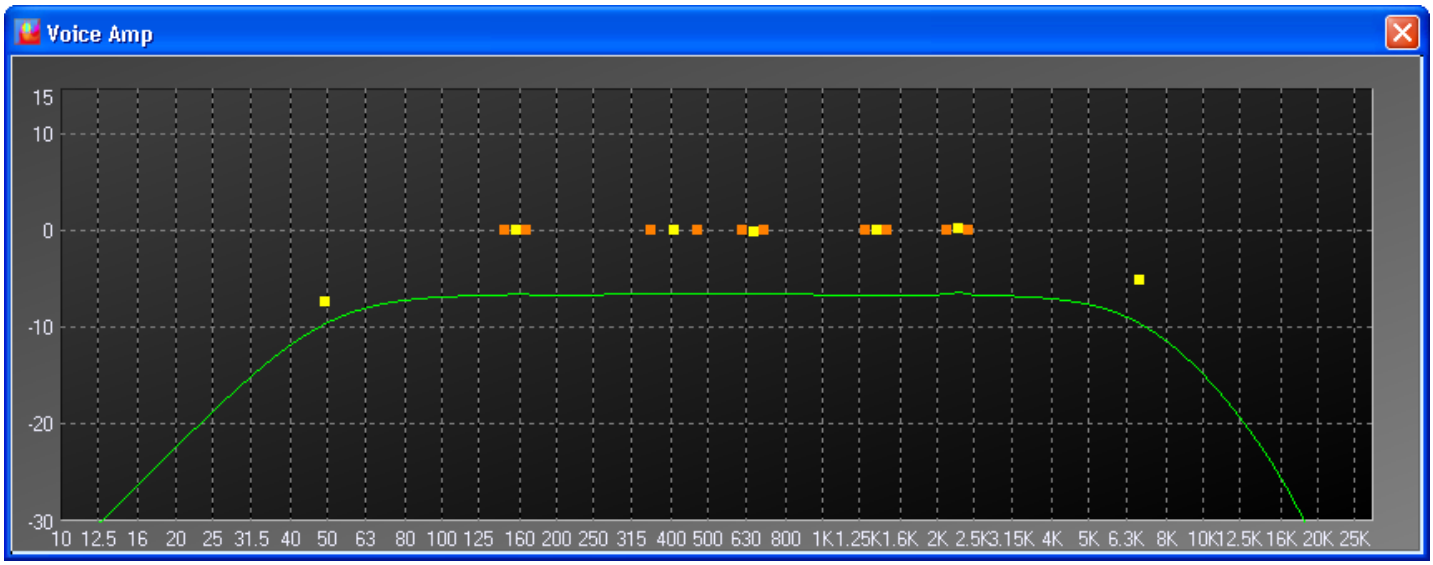
- Clicking on the EQ square, will call for the amplifier equalization page.



- The first PEQ filter can be changed to a High pass filter with the corresponding drop-down menu (see below).
- The last PEQ filter can be changed to a Low Pass filter with the corresponding drop-down menu (see below).



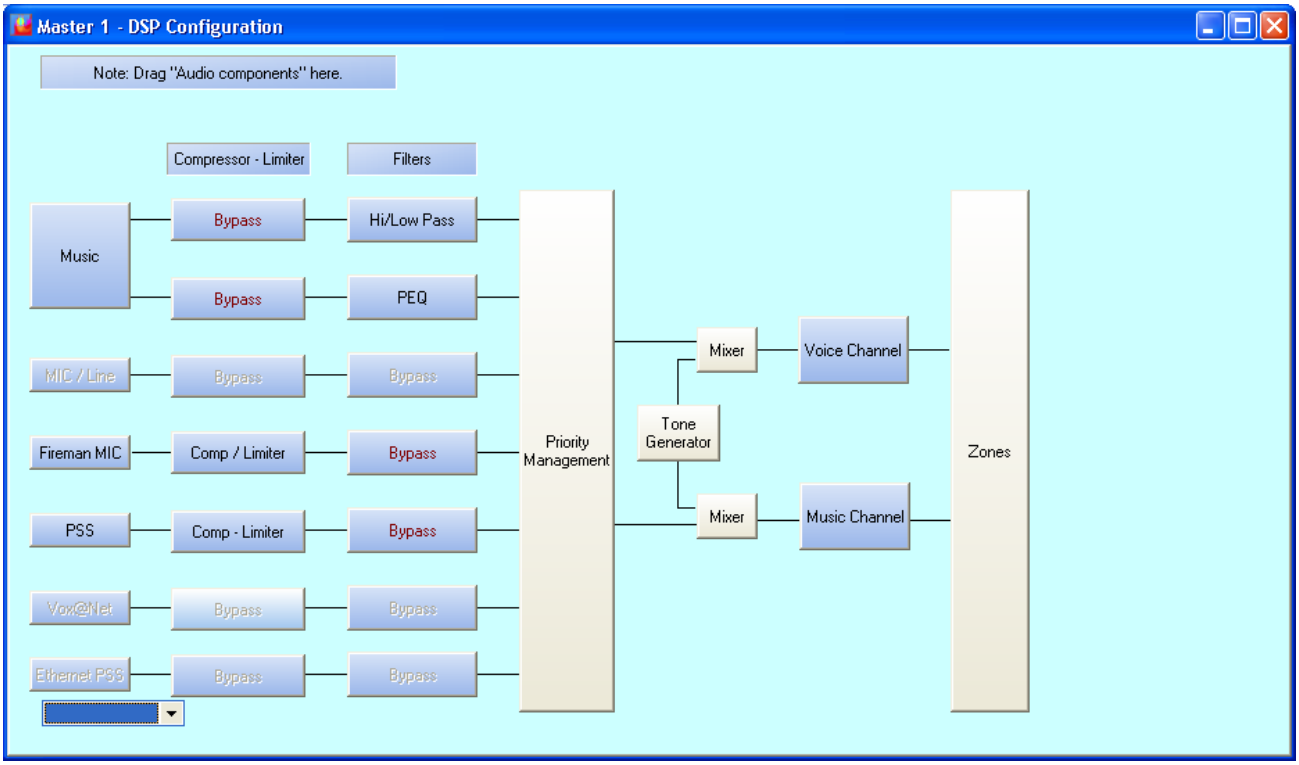
- For the low pass and high pass filter, you have access to the following settings: cutoff frequency and gain.
- By clicking on the Graphic button you will able to adjust the cutoff frequency and the gain directly by moving the corresponding yellow cursor, see below.


Voice Amp
15
10
0
-10
-20
-30
10 12.5 16 20 25 31.5 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K 25K

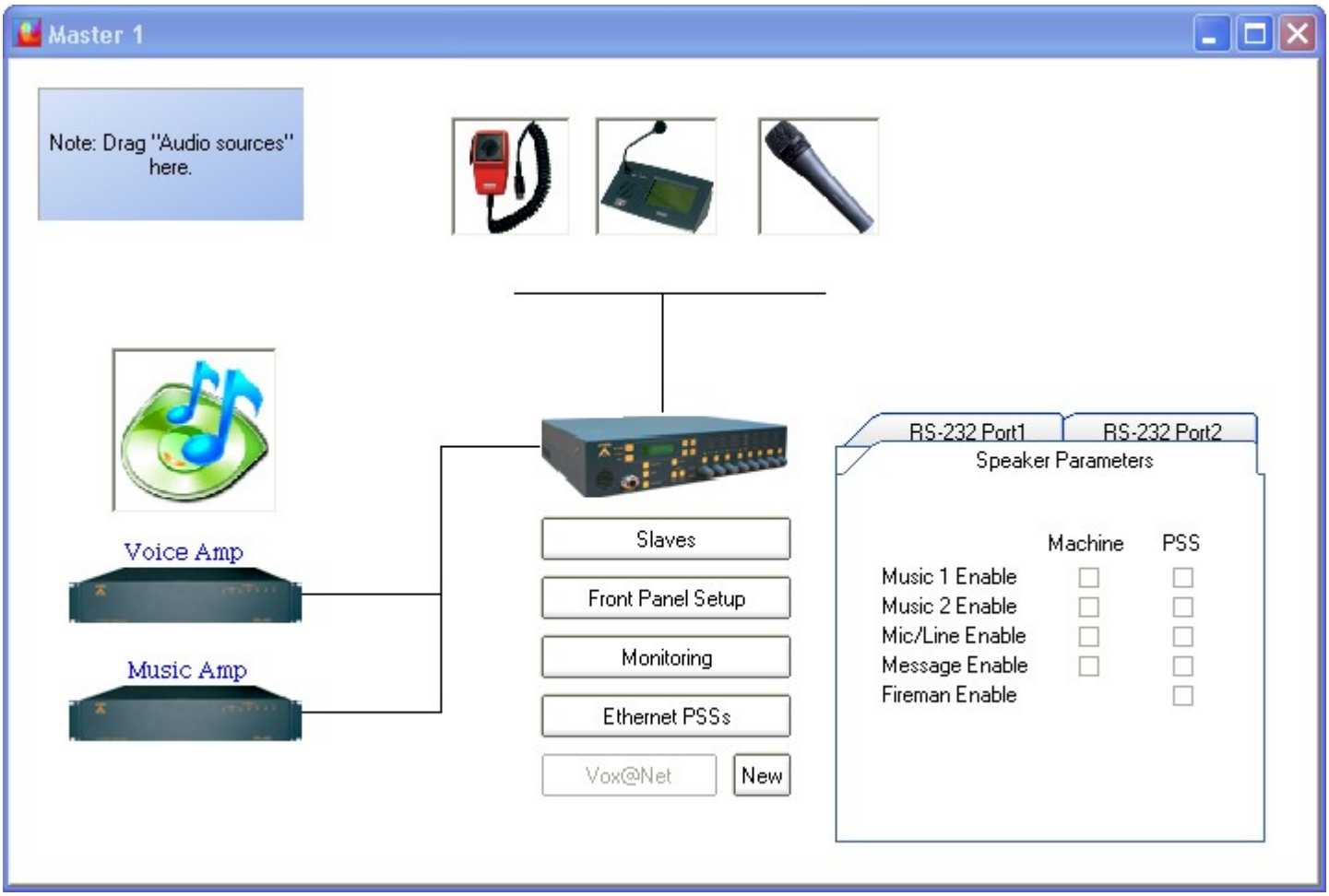
9.38. Use PEQs

On both output channels and input sources, you can add peaking equalization. You can add a three band PEQ on inputs and use up to seven bands PEQ on amplifier outputs.

To access the PEQ on inputs, go on the DSP configuration window.

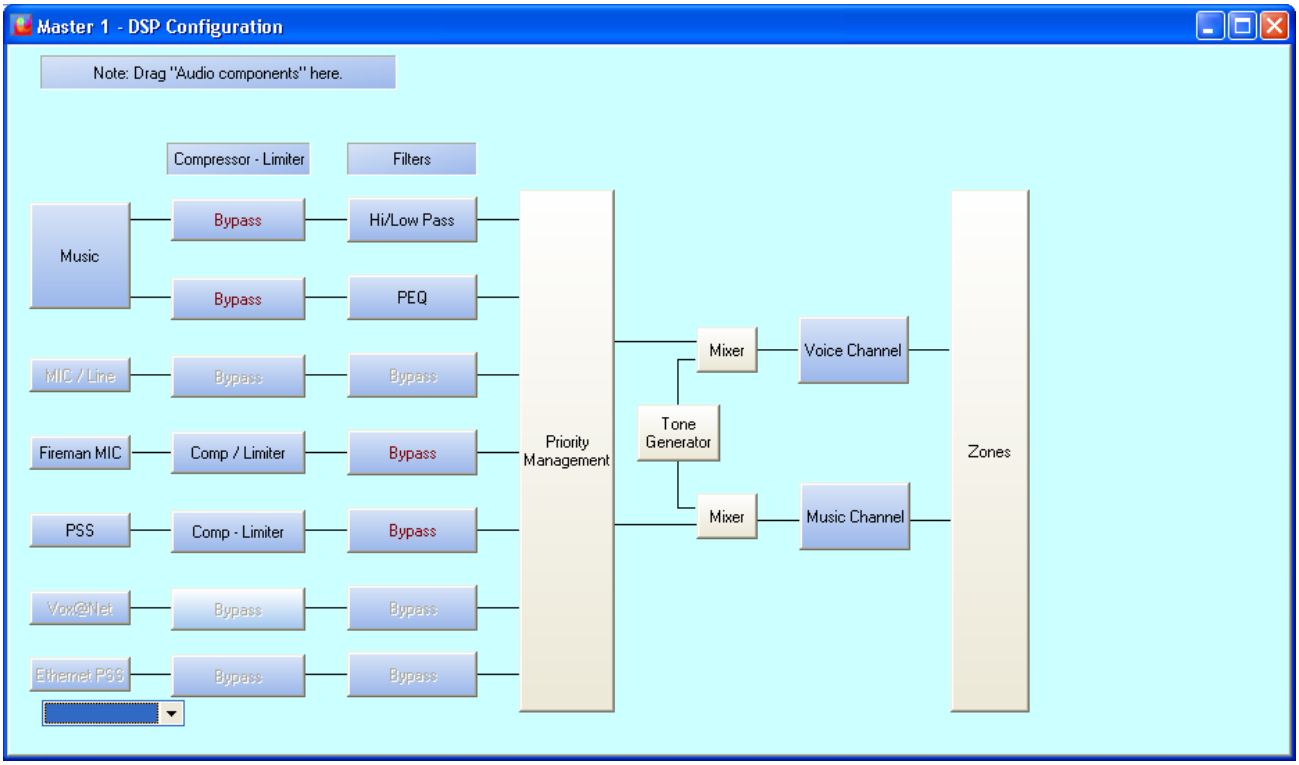


There is two ways to access the PEQs on amplifier outputs, by double clicking the amplifier icon (Voice Amp and Music Amp) on the Master window, see below, or directly by the DSP Configuration window.

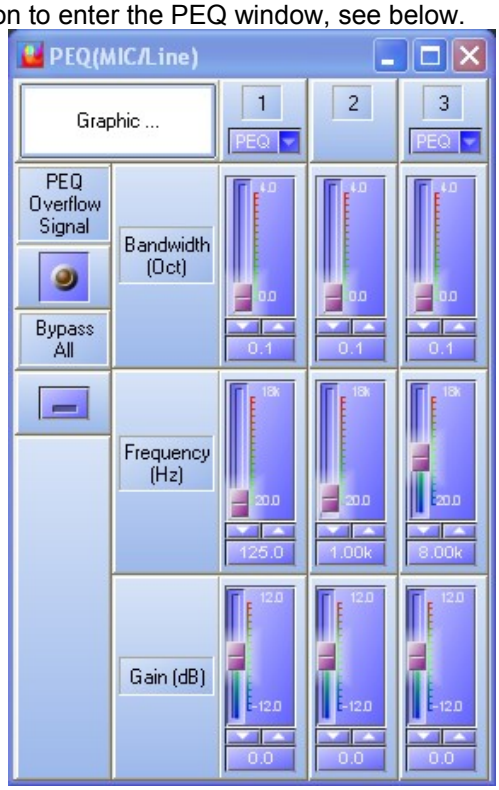

Master 1
Note: Drag "Audio sources" here.
Voice Amp
Music Amp
Slaves
Front Panel Setup
Monitoring
Ethernet PSSs
Vox@Net
New
RS-232 Port1
RS-232 Port2
Speaker Parameters
Machine
PSS
Music 1 Enable
Music 2 Enable
Mic/Line Enable
Message Enable
Fireman Enable

9.38.1. On Inputs

- To add PEQ on an input, drag and drop the PEQ from the filter menu in the Design Component Section. Note: if there is already hi/lo pass filtering on the same input, you won't be able to add PEQ on that input. On one input, you only have one filter location and can use either PEQ or Hi/Lo Pass filtering.



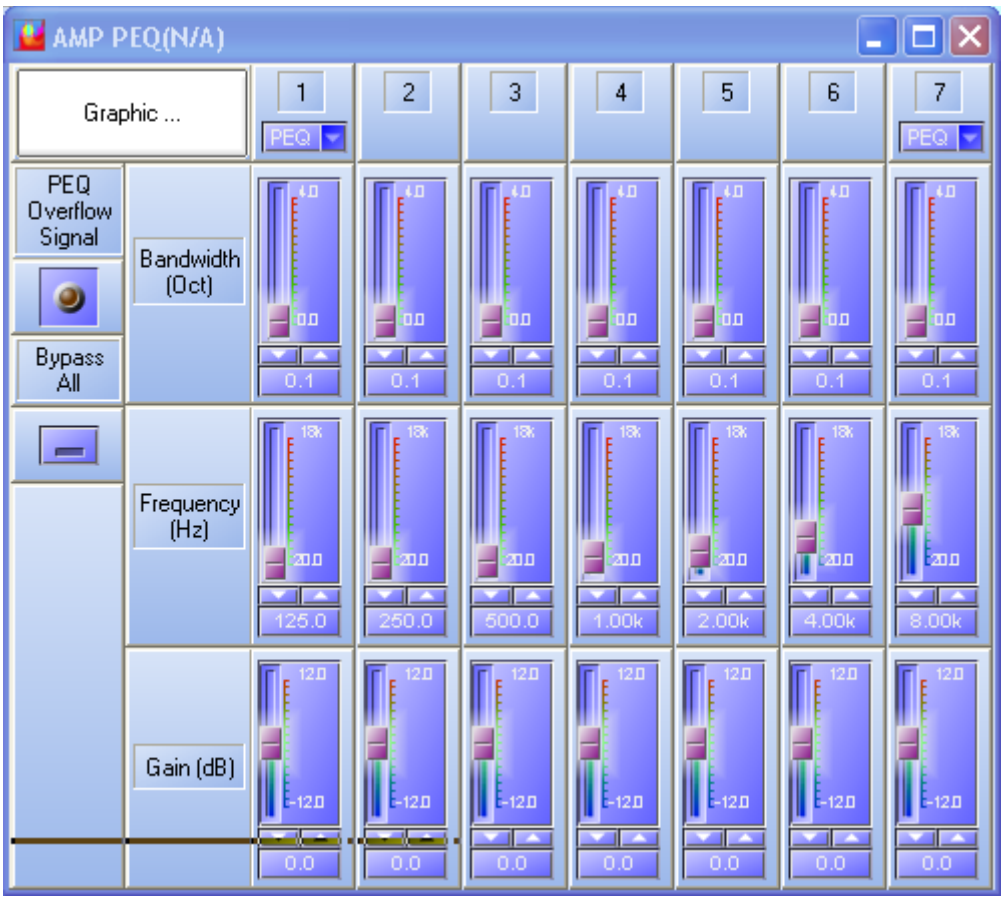
- Double Click on the PEQ icon to enter the PEQ window, see below.



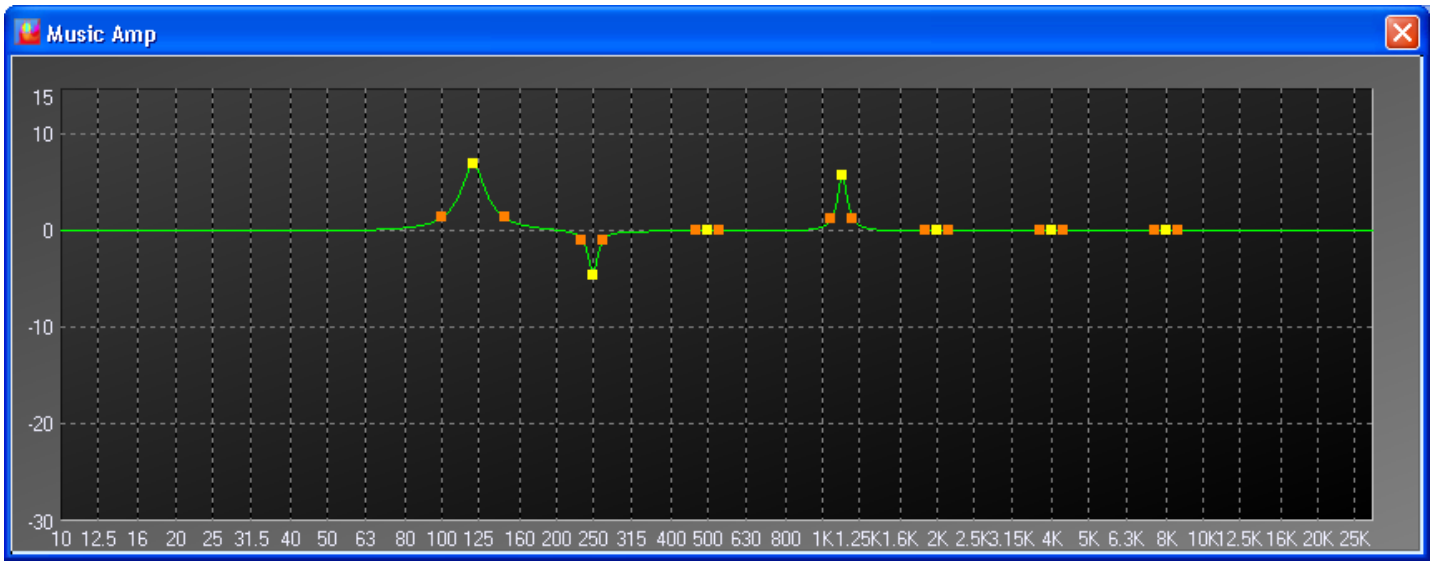
- Adjust the PEQ parameters to suit your needs.

- **Bandwidth (Oct):** here you can adjust the Q factor of the PEQ either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
- **Frequency (Hz):** here sou can adjust the central frequency of the PEQ either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
- **Gain (dB):** here you can adjust the PEQ gain either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
- **PEQ Overflow Signal:** indicates if there is an overflow after the addition of the PEQ to the base signal.
- **Bypass All:** by clicking on the Bypass All button, you will instantaneously bypass all three PEQ filter.
- The first PEQ filter can be changed to a High pass filter with the corresponding drop-down menu.
- The last PEQ filter can be changed to a Low Pass filter with the corresponding drop-down menu.
- By clicking on the Graphic button, you will enter the PEQ graphic edition window. You will be able to adjust gain and central frequency of each PEQ by moving the yellow cursor. Bandwidth is controlled by the orange cursor.

9.38.2. On Outputs



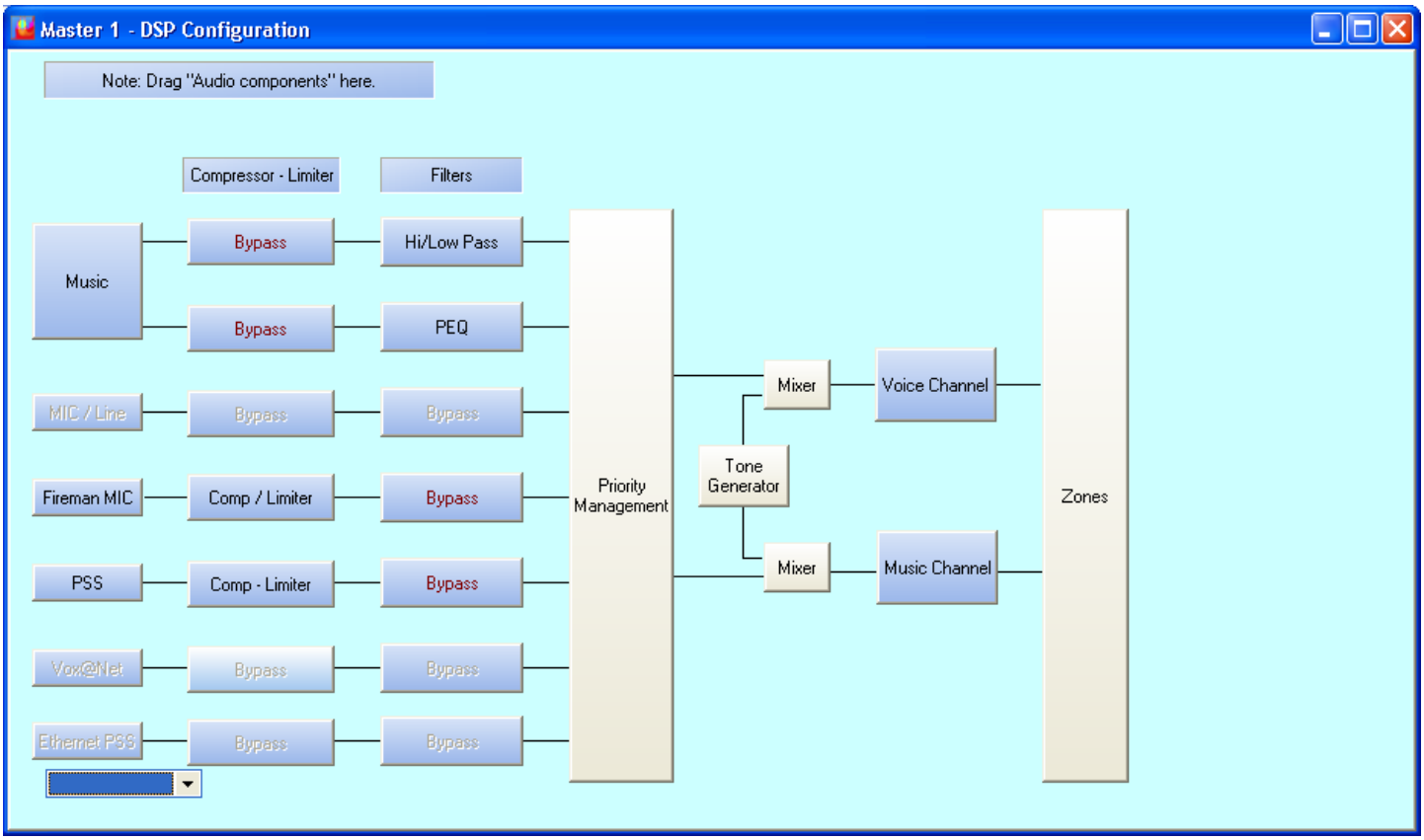
- Adjust the PEQ parameters to suit your needs.
    - **Bandwidth (Oct):** here you can adjust the Q factor of the PEQ either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
    - **Frequency (Hz):** here sou can adjust the central frequency of the PEQ either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
    - **Gain (dB):** here you can adjust the PEQ gain either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
    - **PEQ Overflow Signal:** indicates if there is an overflow after the addition of the PEQ to the base signal.
    - **Bypass All:** by clicking on the Bypass All button, you will instantaneously bypass all three PEQ filter.
    - **Volume (dB):** displays the real-time volume on output.
    - **Level (dB):** allows to adjust the output level either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
    - **Level Overflow:** indicates if there is signal overflow on the base signal.
    - **Graphic:** by clicking on the Graphic button, you will enter the PEQ graphic edition window, see below. You will be able to adjust gain and central frequency of each PEQ by moving the yellow cursor. Bandwidth is controlled by the orange cursor.


Music Amp
15
10
0
-10
-20
-30
10 12.5 16 20 25 31.5 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K 25K

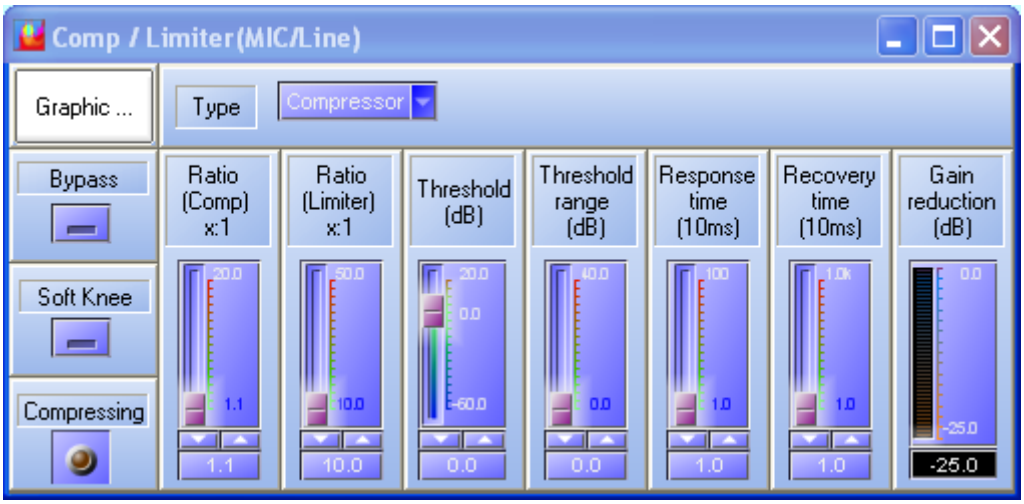
9.39. Use Compressor/Limiter

In DIVA software, you can add for each audio input a compressor, a limiter or a combination of both limiter and compressor. In order to do so, please follow the next few steps:

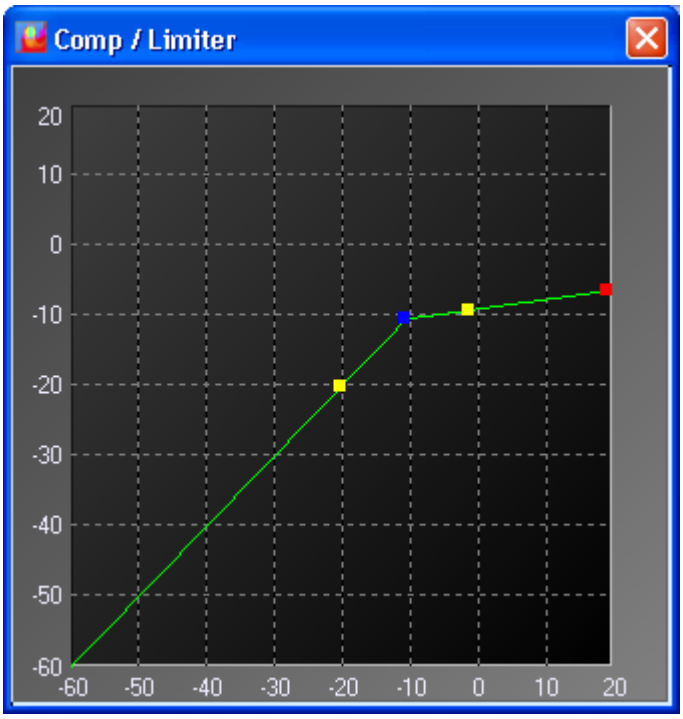
- In the Master window, double-click on the DIVA icon. The DSP configuration window will pop up. Note: if no audio sources have been set into the configuration, the corresponding Filter and Compressor-Limiter location will be grayed.
- Drag and Drop from the Design Component Section either Compressor/limiter or compressor-limiter to the right location.
    - Compressor/Limiter is a component that is either a compressor or a limiter
    - Compressor-Limiter is a component that offers both compression and limitation
    - The DSP configuration windows should look like follow.



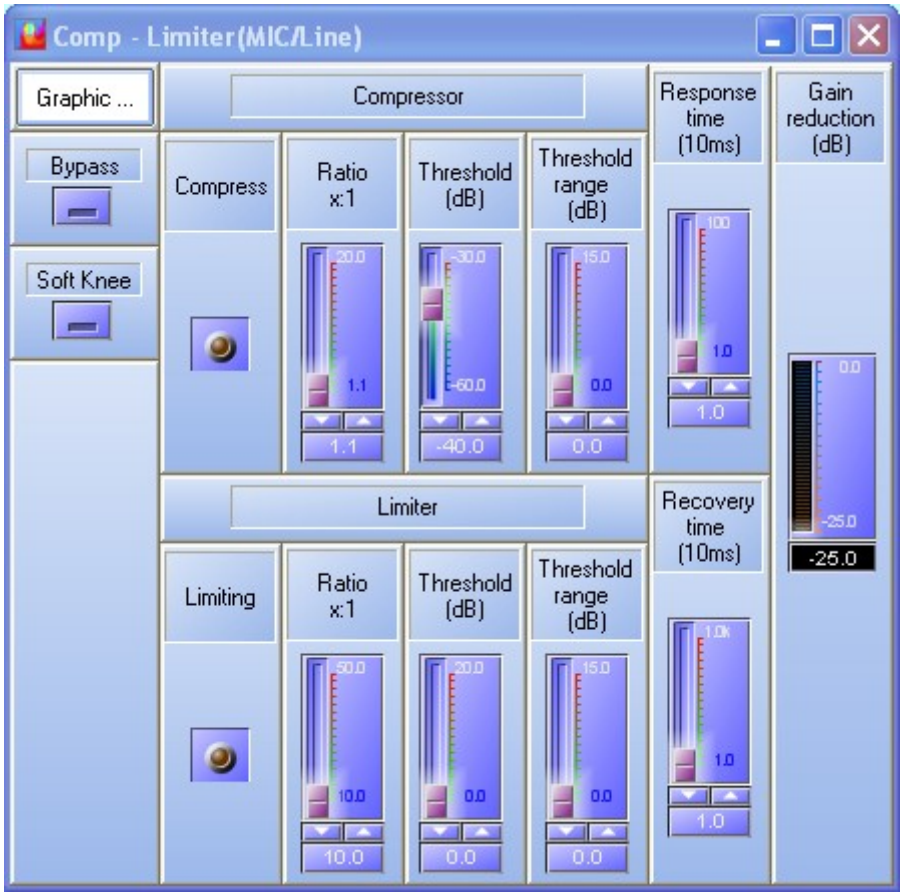
- Double click on the compressor/limiter icon, the compressor/limiter window pops up, see below. Adjust the Compressor/Limiter parameters to suit your needs.



- **Type:** here you can choose between the compressor component or the limiter.
- **Bypass:** clicking on the bypass button will instantaneously bypass the compressor/limiter.
- **Soft Knee:** if the soft knee button is pressed, the a soft knee will be applied to the compressor/limiter instead of a hard knee.
- **Compressing:** in case of compressor, this will indicates if the compression is acting or not.
- **Limiting:** in case of limiter, this will indicates if the limiter is acting or not.
- **Ratio(Comp)x:1:** here you can specify the compression ratio either by using the slide bar, arrow key or by entering directly the value in the dedicated cell. Note: this parameter will have no action if the filter type is set as limiter.
- **Ratio(Limiter)x:1:** here you can specify the limiter ratio either by using the slide bar, arrow key or by entering directly the value in the dedicated cell. Note: this parameter will have no action if the filter type is set as compressor.
- **Threshold (dB):** here you can specify the threshold level from where the limiter or compressor will start acting.
- **Threshold range (dB):** here you can specify the range of level, in which the ratio gradually alters from 1:1 to the value set by the ratio parameter (soft knee function)either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
- **Response time (10ms):** here you specify the attack time for the compressor/limiter.
- **Recovery time (10ms):** here you can specify the release time for the compressor/Limiter
- **Gain reduction (dB):** indicates the current amount of gain reduction.
- **Graphic:** by clicking on the graphic button, this will open the Compressor/Limiter graphic edition window, see below. You can adjust the compression ratio by moving the red cursor, the threshold level by moving the blue cursor and the threshold range with the yellow cursor..

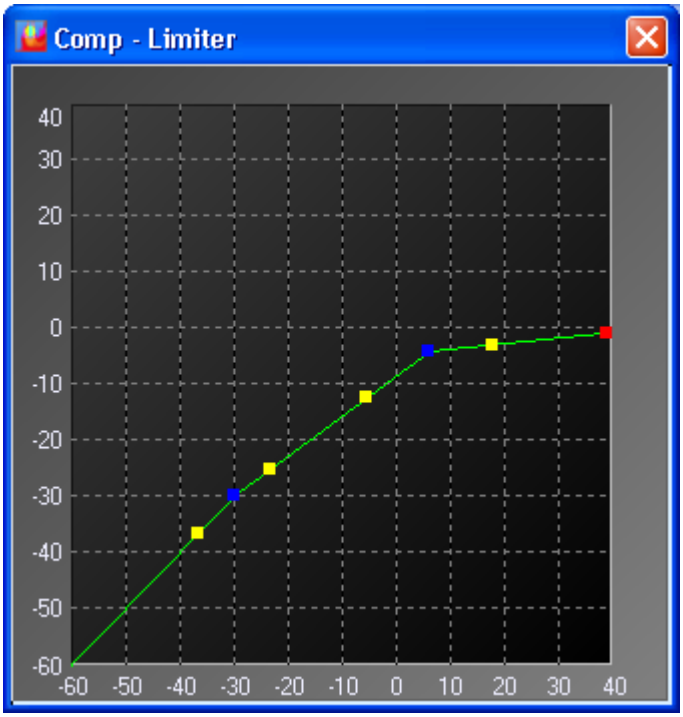


- Double click on the compressor-limiter icon, the compressor-limiter window pops up, see below. Adjust the Compressor-Limiter parameters to suit your needs.



  - **Bypass:** clicking on the bypass button will instantaneously bypass the compressor-limiter.
  - **Soft Knee:** if the soft knee button is pressed, a soft knee will be applied to the compressor-limiter instead of a hard knee.
  - **Compressing:** this will indicates if the compression is acting or not.

- **Limiting:** this will indicates if the limiter is acting or not.
- **Ratio(Comp)x:1:** here you can specify the compression ratio either by using the slide bar, arrow key or by entering directly the value in the dedicated cell. Note: this parameter will have no action if the filter type is set as limiter.
- **Ratio(Limiter)x:1:** here you can specify the limiter ratio either by using the slide bar, arrow key or by entering directly the value in the dedicated cell. Note: this parameter will have no action if the filter type is set as compressor.
- **Threshold (dB):** here you can specify the threshold level from where the limiter or compressor will start acting.
- **Threshold range (dB):** here you can specify the range of level, in which the ratio gradually alters from 1:1 to the value set by the ratio parameter (soft knee function)either by using the slide bar, arrow key or by entering directly the value in the dedicated cell.
- **Response time (10ms):** here you specify the attack time for the compressor-limiter.
- **Recovery time (10ms):** here you can specify the release time for the compressor-Limiter
- **Gain reduction (dB):** indicates the current amount of gain reduction.
- **Graphic:** by clicking on the graphic button, this will open the Compressor-Limiter graphic edition window, see below. You can adjust the limitation ratio by moving the red cursor, the limiter threshold level and compression ratio by moving the upper blue cursor and the limiter threshold range with the upper yellow cursor. You can adjust the compressor threshold level by moving the lower blue cursor and the compressor threshold range with the lower yellow cursor.



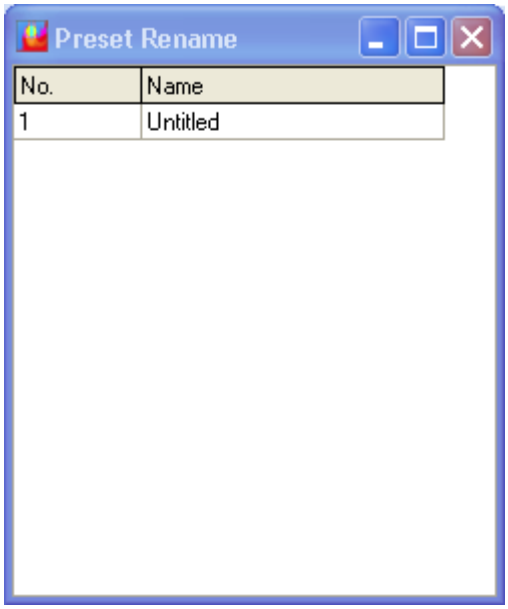
9.40. Use Presets

The DIVA application allows user to create different preset that can control audio settings (audio levels on each source, hi-pass and low-pass filter settings, compressor-limiter settings). Loading a preset will change the current audio settings; you can adjust audio settings for different situation using several presets.

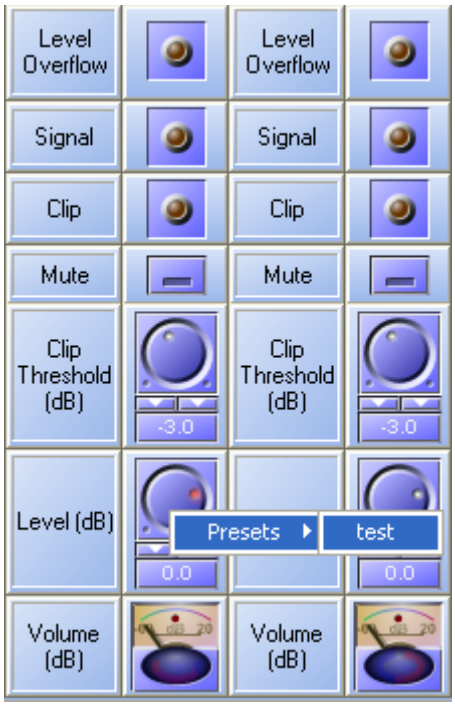
In order to create a preset, please follow the next few steps.

- To create a new preset, click on the Add button in the preset toolbar

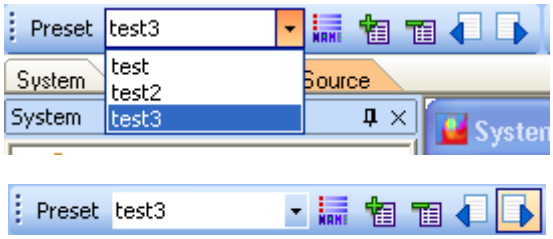
- By default, the preset created is named untitled X. You can rename it by clicking on the Name button in the preset toolbar.



- To relate a setting to a preset, right click on the control and link it to a created preset in the list. The value set when linking a control to a preset will be saved to the preset.



- To load a preset, select the preset from the list in the preset toolbar and click on the load button.



- To modify a setting in the preset, load the preset, change the value and then save the preset with the save button in the preset toolbar.

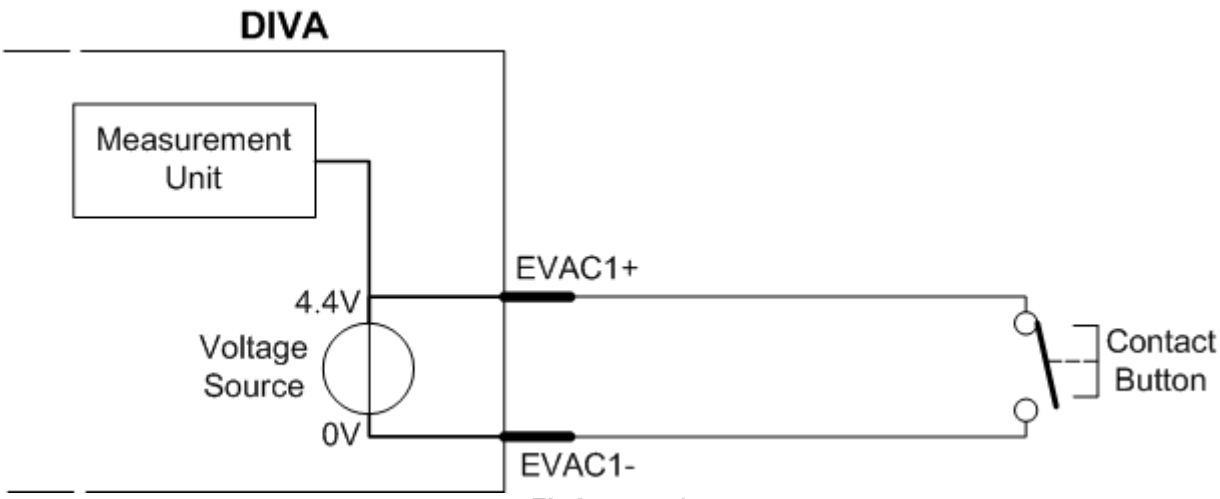
Presets can be loaded using the load preset event. To learn more about the load preset event, please read this.

Note: a control can be affiliated to several preset, to do it assign the control to all the preset.

9.41. Create a Monitorable Button

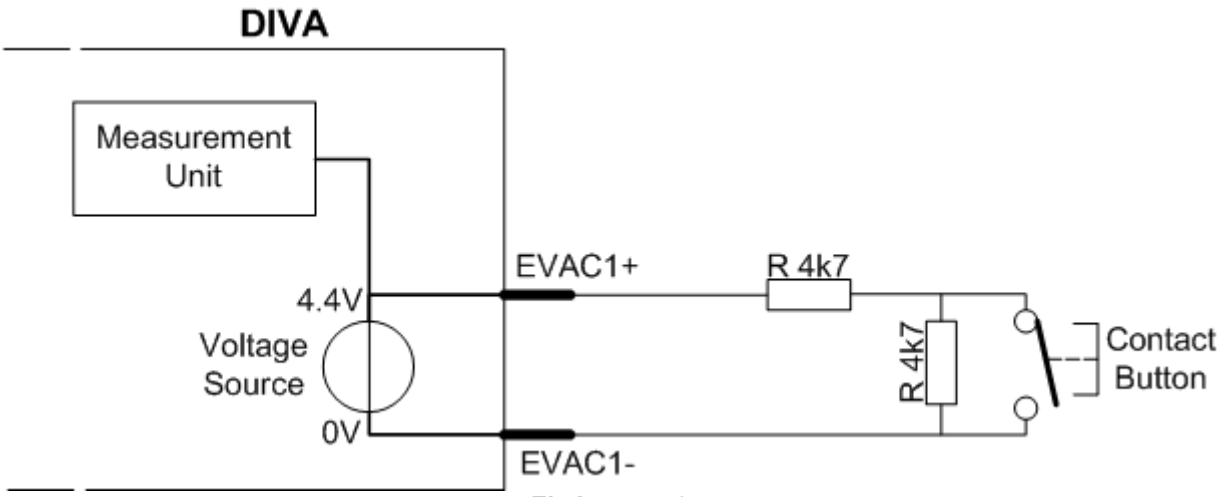
The surveillance of a contact line, a microphone line or speaker line is based on the same measurement. An internal voltage source is applied to the input or output terminal. By measuring this tension, it is possible to know the state of the input or output.

With a normal contact (see picture below), you only will be able to measure two states: Open or Shorten. Shorten (when contact is closed) forces the voltage source to zero.



FigAnnexe 1

In this case, the measurement unit can only detect 0V (closed) or 4.4 V (opened). In order to have different state measurement like open line and short-circuit we need to add a resistor network to the end of the line, see picture below.



FigAnnexe 2

Using the resistor Network, the measurement unit can detect 4 different states: 1.3 V, 2 V, 2.7 V and 4.4 V. The 4 states correspond respectively to Shortcut, Closed Contact, Opened contact and Absent (open line).

According to the FigAnnexe 2, you have a fully monitored line responding to the security norms.

9.42. Use Tone Generator

In the DIVA software you can control the tone generator parameters. To access the tone generator parameters window, click on "Monitoring" under the DIVA icon in the system window. Then click on the Tone Generator button.

- **Mute:** here you can mute the generation of the pilot tone
- **Frequency (Hz):** allows to choose between 18kHz and 20kHz pilot tone by using the drop-down menu
- **Target Level (dB):** allows to increase the tone level up to 10dB
- **Enable 1K Tone:** ticking this option allows to add a 1kHz signal to the current pilot tone

9.43. Use RS232 Ports

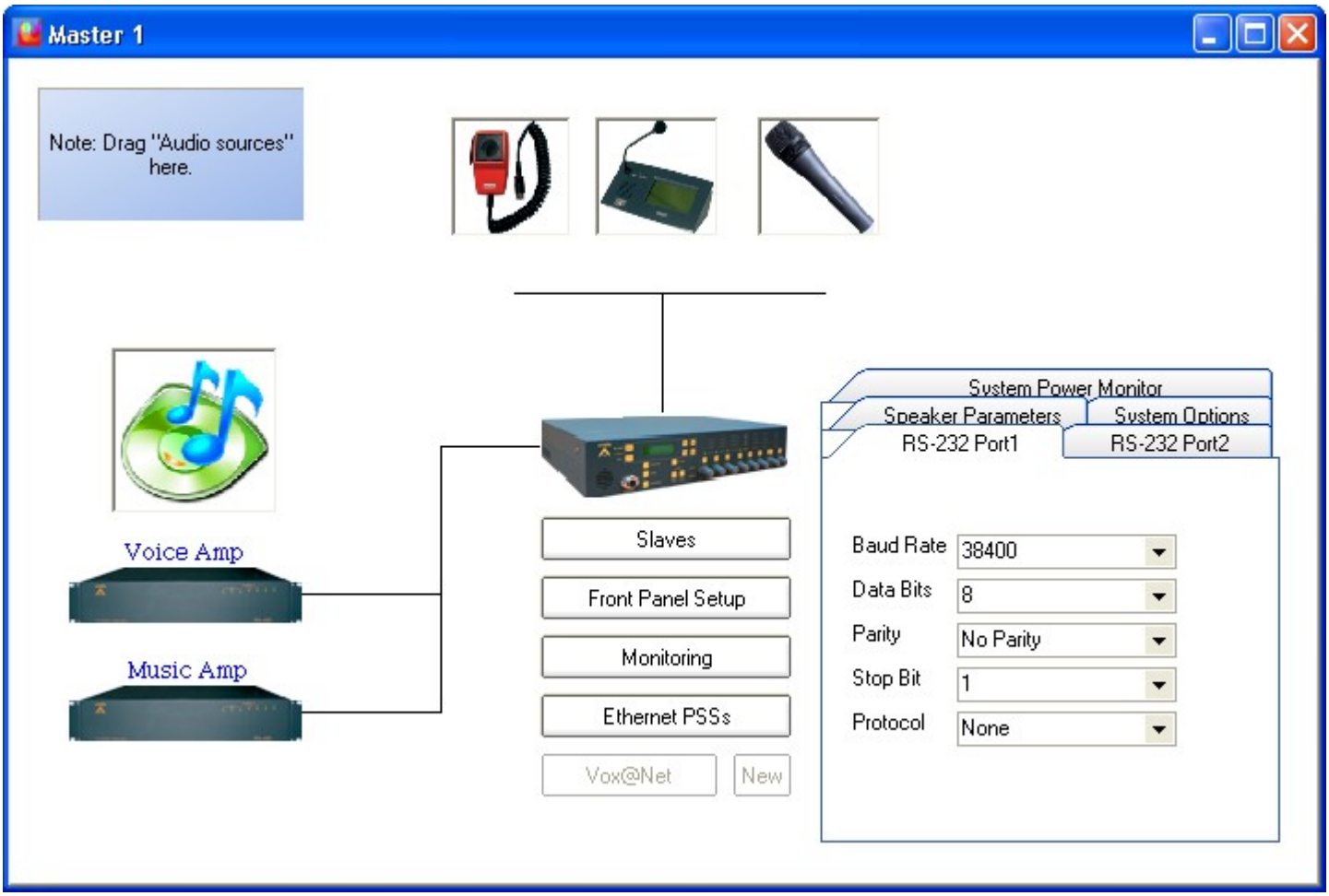
The RS232 allows to connect DIVA to an external DIVA such as a firepanel, a Modbus host, a Vox@net network or a remote access master.

For RS-232 pinning, please refer to the How to wire RS232 chapter.

9.43.1. For Modbus

In this chapter, we will see how to set the RS232 port of DIVA to communicate with a Modbus server.

- To access the RS232 port settings, click on the RS-232 Port1 or RS-232 Port2 tabs. As the settings are the same for both ports, only one will be introduced.



Procedure:

- On RS-232 Port 1, choose the Modbus protocol with the protocol drop-down menu.
- Select the appropriate Baud Rate: for Modbus choose 9600.
- Data bit should be set to 8.
- Stop bit should be set to 1.
- Parity should be set to "No Parity".

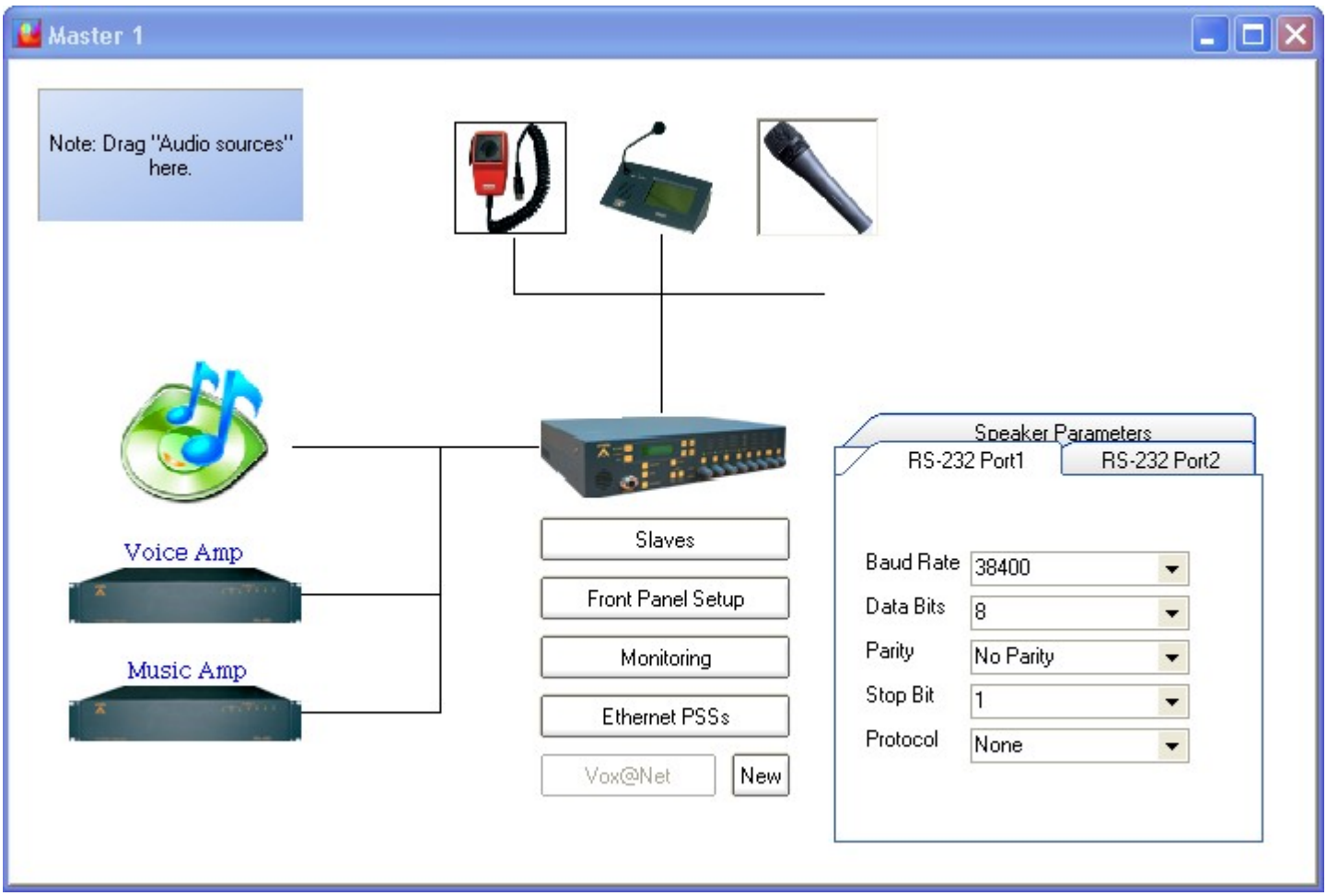
More information about the Modbus protocol and how to use it with DIVA can be found in the communication protocols chapter.

The serial port pinning information can be found in the How to Wire Devices chapter.

9.43.2. For Notifier Protocol

In this chapter, we will see how to set the RS232 port of DIVA to communicate with a Notifier fire panel.

- To access the RS232 port settings, click on the RS-232 Port1 or RS-232 Port2 tabs. As the settings are the same for both ports, only one will be introduced.



Procedure:

- On RS-232 Port 1, choose the Notifier protocol wit the protocol drop-down menu.
- Select the same Baud Rate choosen on the fire panel. In the Notifier protocol, the baud rate can be chosen according to the needs.
- Data bit should be set to 8.
- Stop bit should be set to 1.
- Parity should be set to "No Parity".

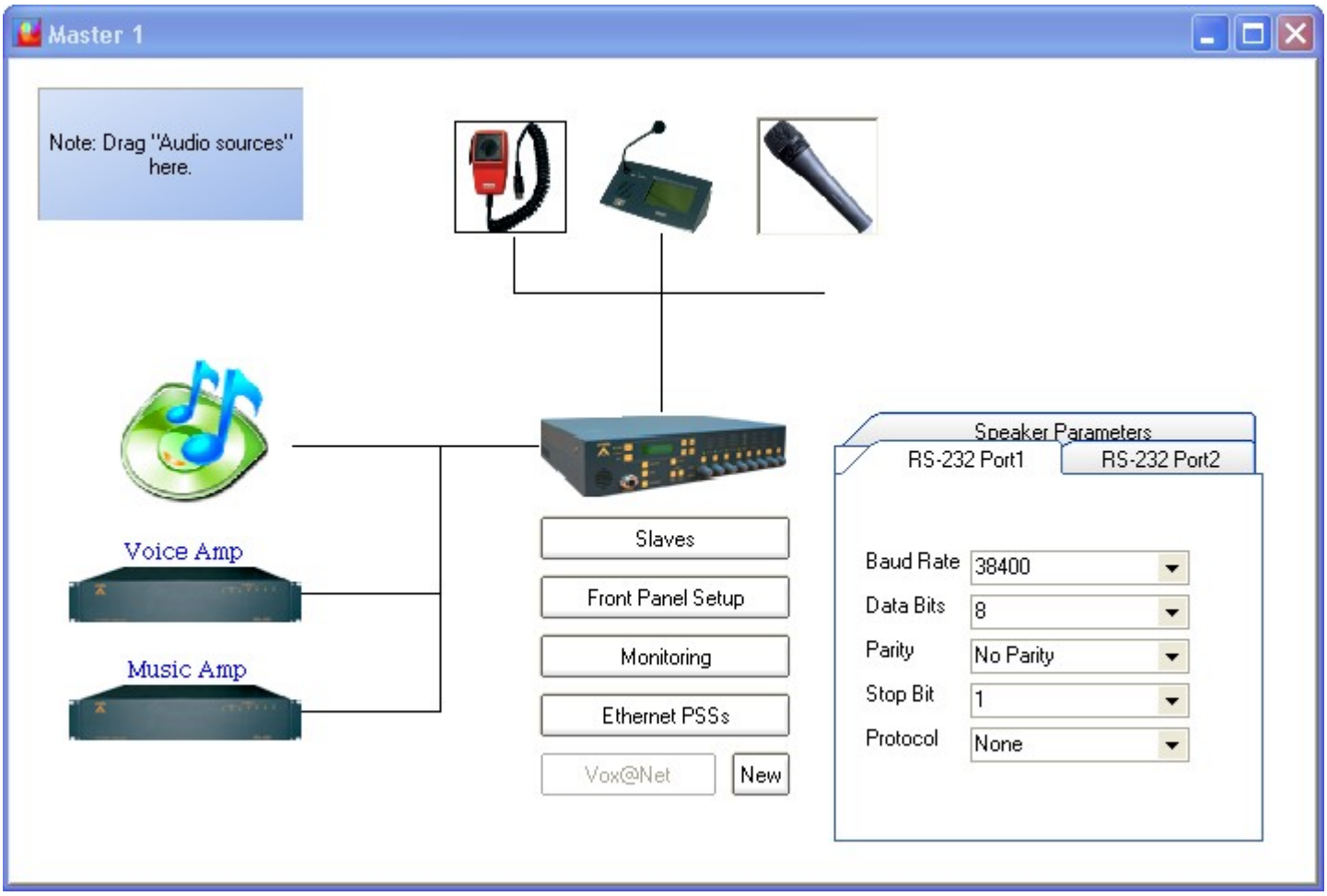
More information about the Notifier protocol and how to use it with DIVA can be found in the communication protocols chapter.

The serial port pinning information can be found in the How to Wire Devices chapter.

9.43.3. For Vox@net/Modan

In this chapter, we will see how to set the RS232 port of DIVA to communicate with a Vox@net server/client or in a remote access (modan protocol) configuration.

- To access the RS232 port settings, click on the RS-232 Port1 or RS-232 Port2 tabs. As the settings are the same for both ports, only one will be introduced.



Procedure:

- On RS-232 Port 1, choose the Vox@Net protocol wit the protocol drop-down menu.
- Select the 9600 as Baud Rate.
- Data bit should be set to 8.
- Stop bit should be set to 1.
- Parity should be set to "Even Parity".

More information about the Vox@net protocol and how to use it with DIVA can be found in the communication protocols chapter.

The serial port pinning information can be found in the How to Wire devices chapter.

9.44. Put DIVA in Vox@net

The DIVA system can be used as a matrix in any Vox@Net system. It can also be used in a remote access configuration using RS-232. DIVA acts as a "slave" unit in bot Vox@Net and Modan.

From a DIVA point of view, the Vox@net protocol and Modan protocol are equivalent.

Vox@Net/Modan explanation:

The basics of those protocols communication is that DIVA receive audio stream along with RS-232 command.

So from a DIVA machine point of view, one will have to set RS-232 port setting to receive command and set audio input to be triggered by RS-232 command.

In a simple manner, RS-232 will allow to activate a music source routing in zone(s) according to the parameter sent via RS-232.

Both protocol are acting, from a DIVA point of view, as Master-Slave network in which DIVA is always a slave.

More information about Modan command could be found about Vox@Net/Modan protocol in the Communication Protocols chapter.

Data transmission mode:

The Modan protocols offers two different ways of communication between devices: Point to Point and Multipoint. Point to Point is a direct communication path between to system where Multipoint is using RS-232 bus with device dependant addresses.

Vox@net always use the Multipoint mode and remote access offers the choice between the two mode.

- In case of using Point to Point mode, no addresses are affiliated to devices in the remote access system.
- In case of Multipoint, all slave devices have a static address (range from 1 to 32).

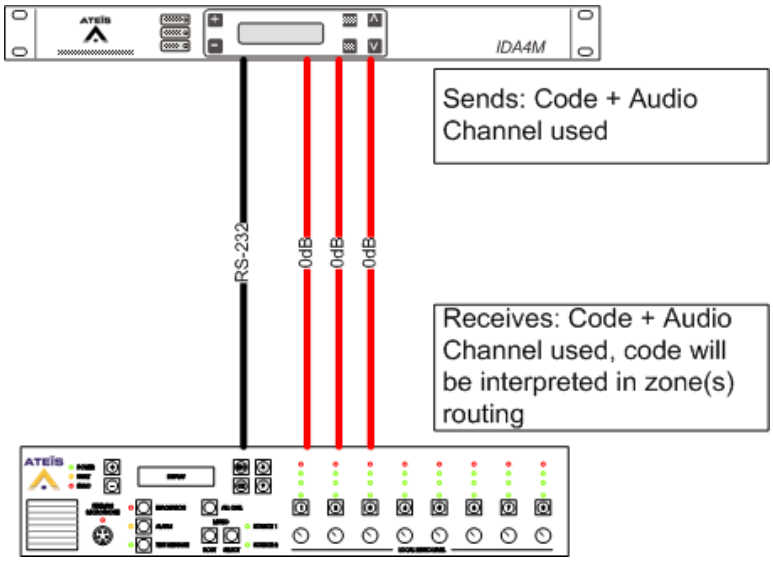
Audio Routing:

As stated before, the Master (Vox@net server/client or remote access master) send information to the slave unit in order to route audio to physical zones.

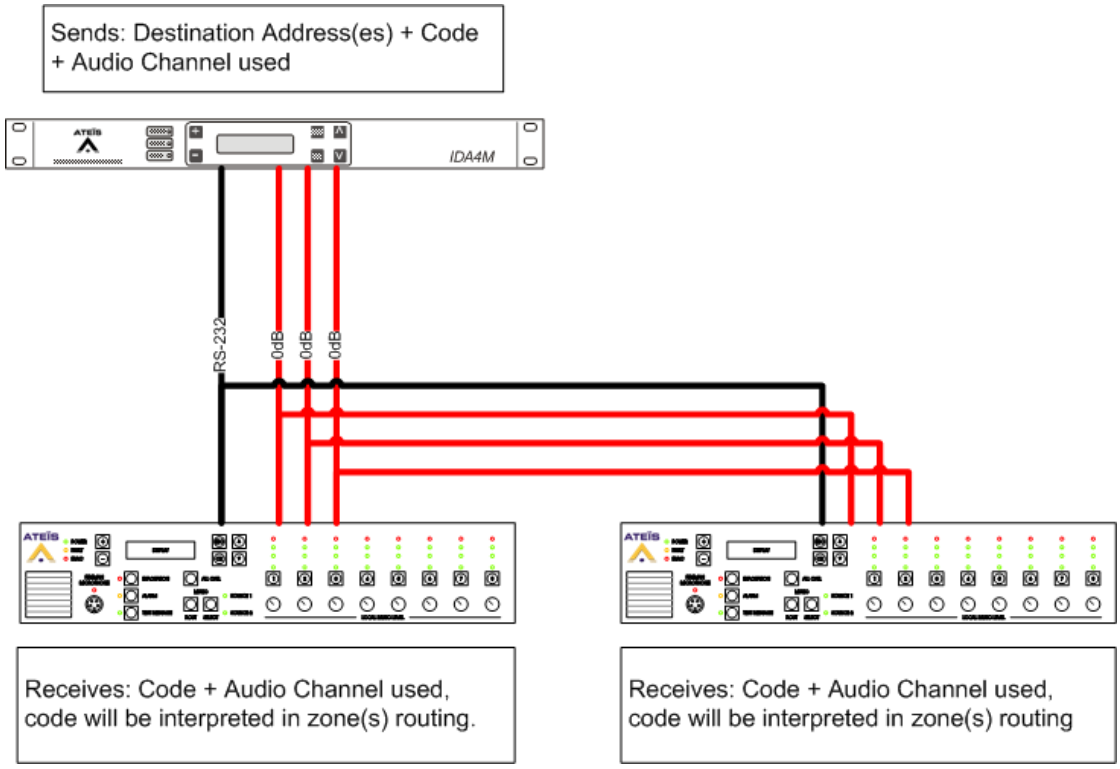
The Master sends a code that will be interpreted by the slave unit. From a Master point of view, the code sent has no zone routing information. The routing corresponding to a code is slave dependant. In Multipoint mode, it means that each slave can receive the same code and this code will be interpreted differently by each of them, see schematics below.

With DIVA, the maximum number of audio channels a Vox@net system or a remote access that can be used is three. The number of channels you need, will be determined by the number of simultaneous audio stream you whish to receive. One channel is the minimum; however a two channel configuration is most of the time the minimum audio channel configuration recommended.

Point to Point



Mulitpoint


Sends: Destination Address(es) + Code + Audio Channel used
IDA4M
RS-232
0dB
0dB
0dB
Receives: Code + Audio Channel used, code will be interpreted in zone(s) routing.
Receives: Code + Audio Channel used, code will be interpreted in zone(s) routing

DIVA configurations:

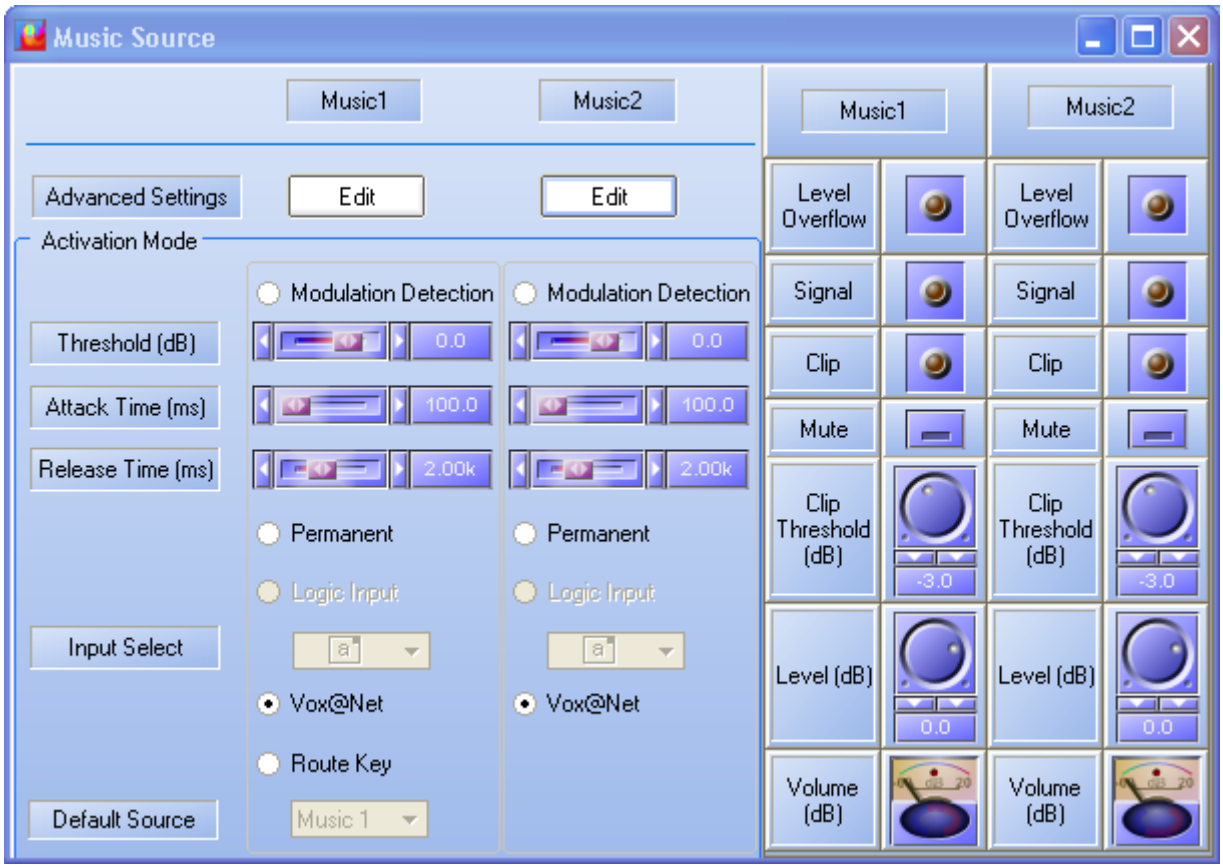
As DIVA will always be slave in such system, the master configuration will be skipped from this chapter. Please read for Vox@net and IDA4M(XM) for more information about Master settings.

Point to Point:

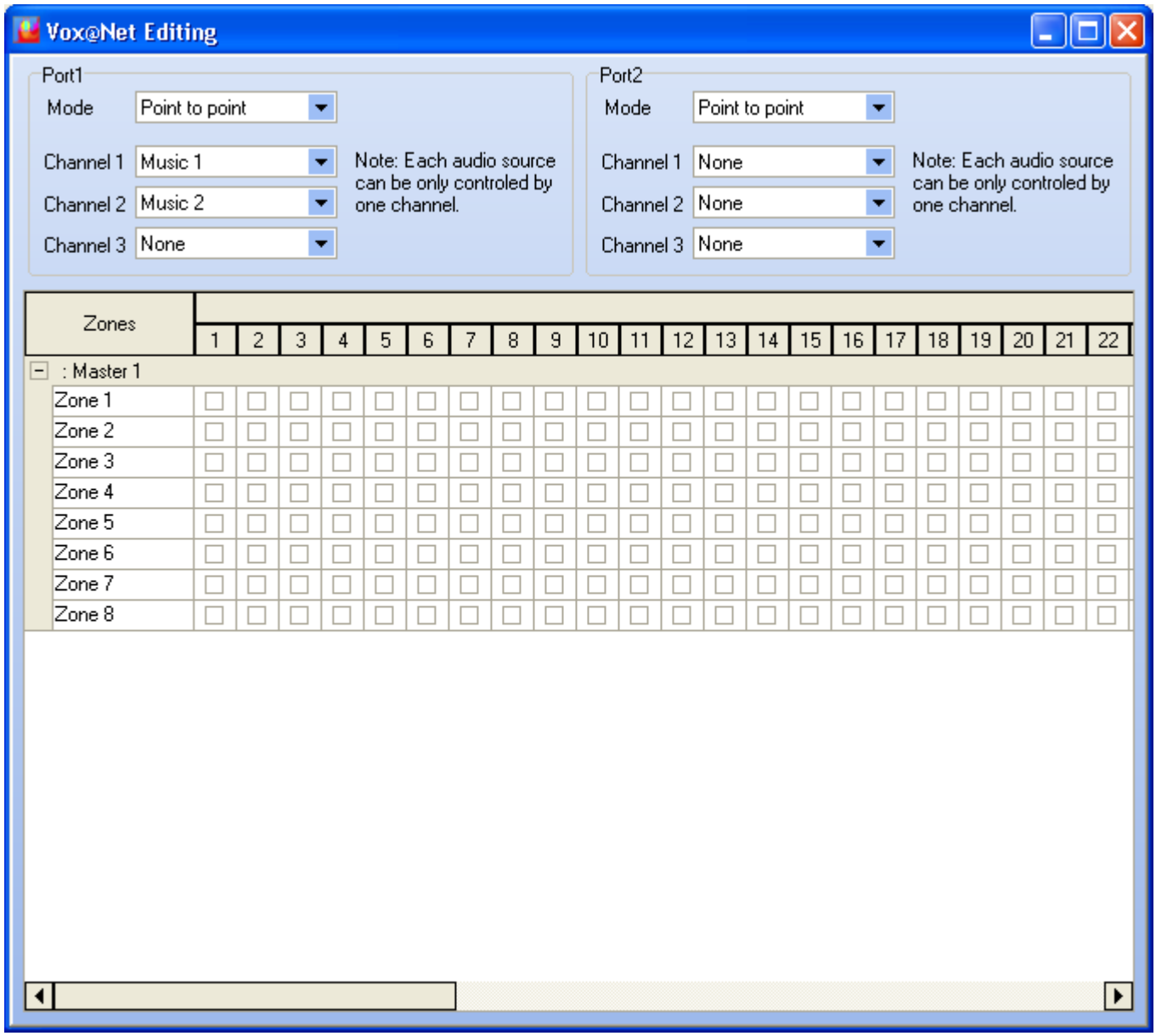
In order to configure DIVA for Vox@net or Modan, you have to set parameters for RS-232 port 1 or port 2 of DIVA, please read the Use RS232 Ports chapter.

First step, configure the audio input that will be used for Vox@net or remote access streaming. In this tutorial, we'll only use the two Music Sources.

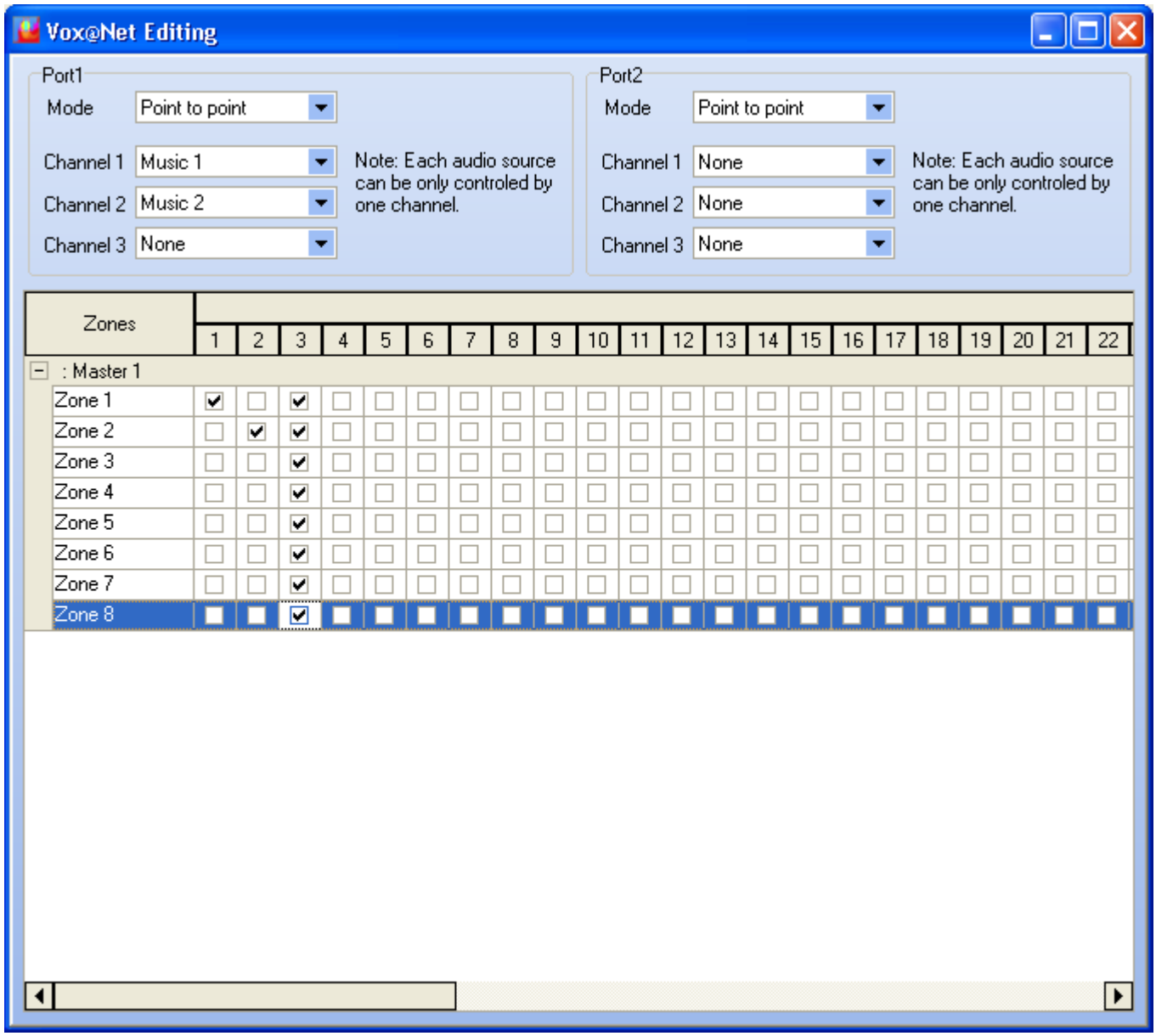
- enter the Music sources window by double clicking the music Icon on the Master window.



- Select for both source the vox@net mode.
- Go into the menu View -> Vox@Net Editing, the following window should pop up.



- In the mode drop-down menu, select "Point To Point" under the corresponding RS-232 port.
- In the Channel 1 drop-down menu, select "Music 1".
- In the Channel 2 drop-down menu, select "Music 2".
- In zone codes area, create your audio routing corresponding to code received (maximum code number 64). Example below shows code 1 = zone 1, code = zone 2 and code 3 = all zone.



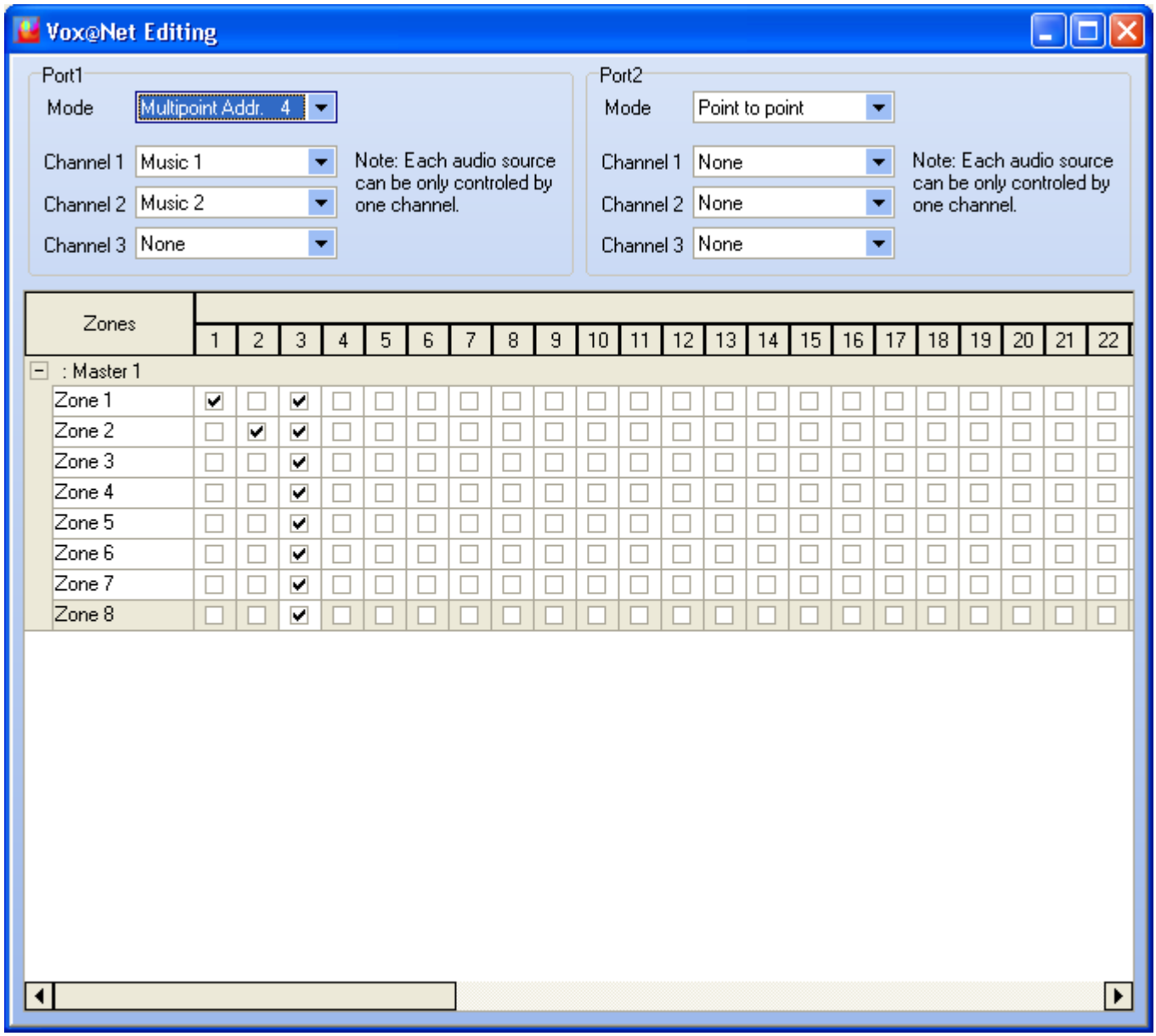
- Compile and Store config

At that point, DIVA will route Music 1 or Music 2 according to the code received. If the master sends "Channel 2, code 2", DIVA will route Music 2 input to zone 2. Channel 1 or channel 2 will be used depending on remote access master channel selection.

Multipoint:

DIVA's audio input will be used in the same way for point to point mode or in multipoint mode, so the following steps only concern the Vox@net editing window.

- Go into the menu View -> Vox@Net Editing, the following window should pop up.



- In the mode drop-down menu, select "Multipoint Addr X" under the corresponding RS-232 port. Choose the Multipoint address according to the multipoint master configuration.
- In the Channel 1 drop-down menu, select "Music 1".
- In the Channel 2 drop-down menu, select "Music 2".
- In zone codes area, create your audio routing corresponding to code received (maximum code number 64). Example below shows code 1 = zone 1, code = zone 2 and code 3 = all zone.
- Compile and Store config.

At that point, DIVA will route Music 1 or Music 2 according to the code received. If the master sends "Address 4, Channel 2, code 2", DIVA will route Music 2 input to zone 2. Channel 1 or channel 2 will be used depending on remote access master channel selection.

All other RS-232 data send to other addresses will be ignored by DIVA.

9.45. Page Into Vox@net

Under Construction

9.46. Configure Remote Access

The Remote access DIVA configuration is equal to the Vox@net configuration. Please refer to the How to Put DIVA in Vox@net chapter.

9.47. Wire Devices

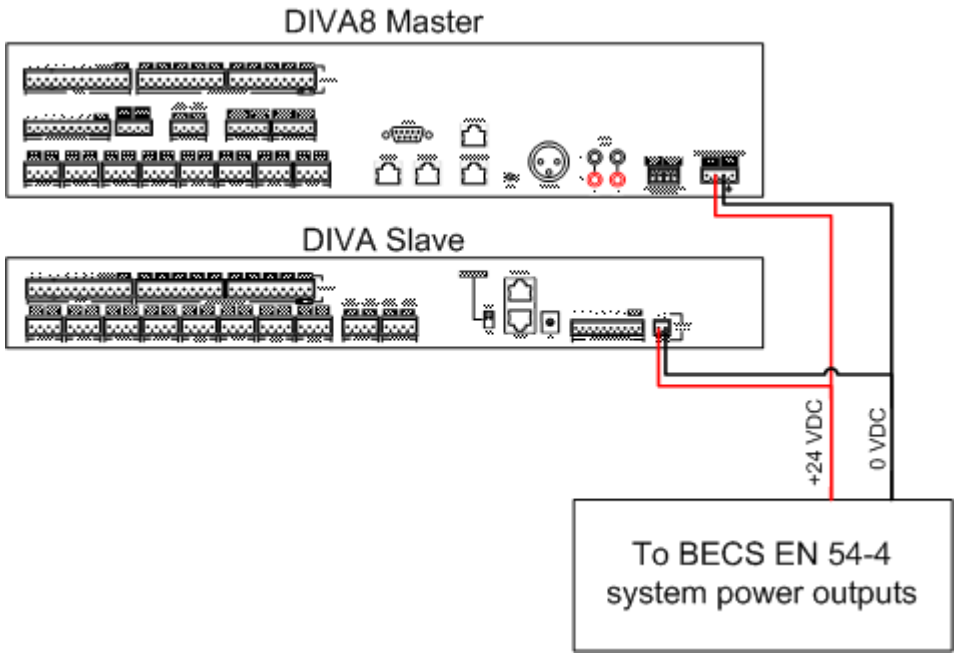
In this chapter you will find schematics about how to wire DIVA with external devices. Here is the list of devices that will be discussed:

- Power Supply
- Fireman Microphone
- PSSG2 Microphone
- PSSG2-E Microphone
- PSM Microphone
- CD16 Microphone
- Music Sources
- Mic/Line
- Amplifier
- Speaker lines
- Normal Logic Inputs
- Evacuation Inputs
- Logic Outputs
- 100V link Output
- Computer
- RS232
- DIVA8S
- Remote Panel

9.47.1. Power Supply

The DIVA operating voltage supply is 24VDC. Pleas use only the provided power block or something equivalent.

To connect DIVA to a 24VDC power supply, use an euroblock connector in order to link the power supply to the 24VDC and 0V DIVA inputs.

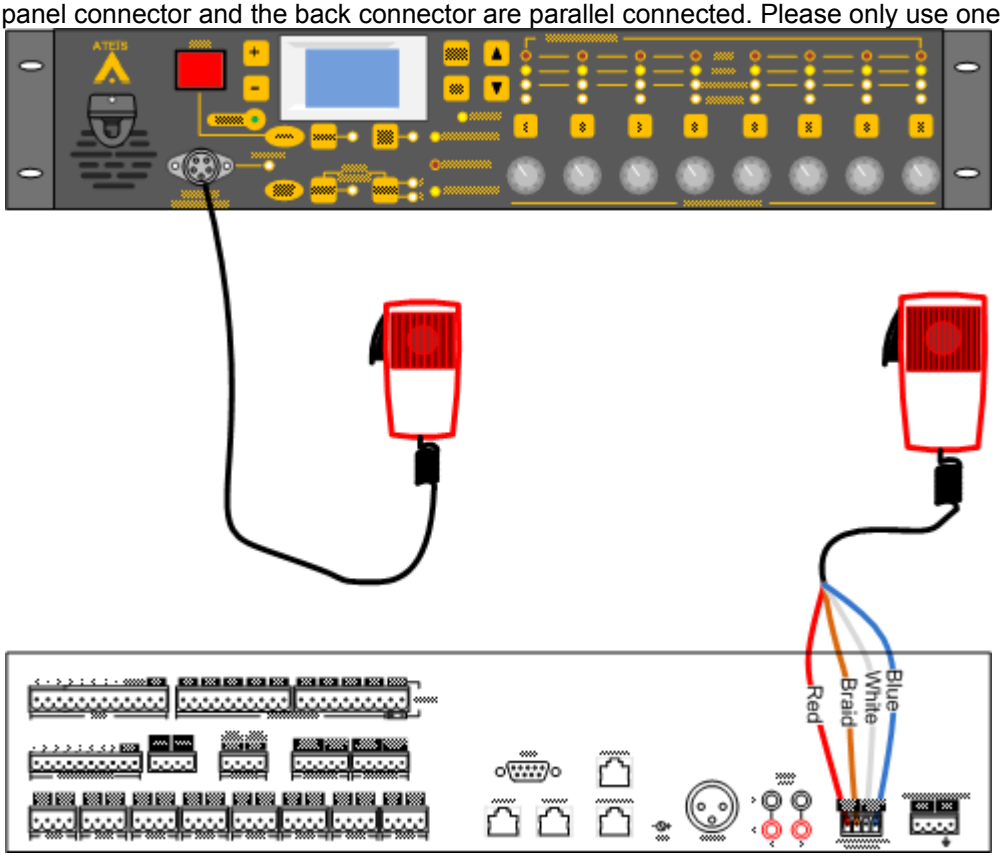


In order to fullfil european standard, DIVA8 system should be connected to a battery charger and a security power supply (like Ateis BECS series).

9.47.2. Fireman Microphone

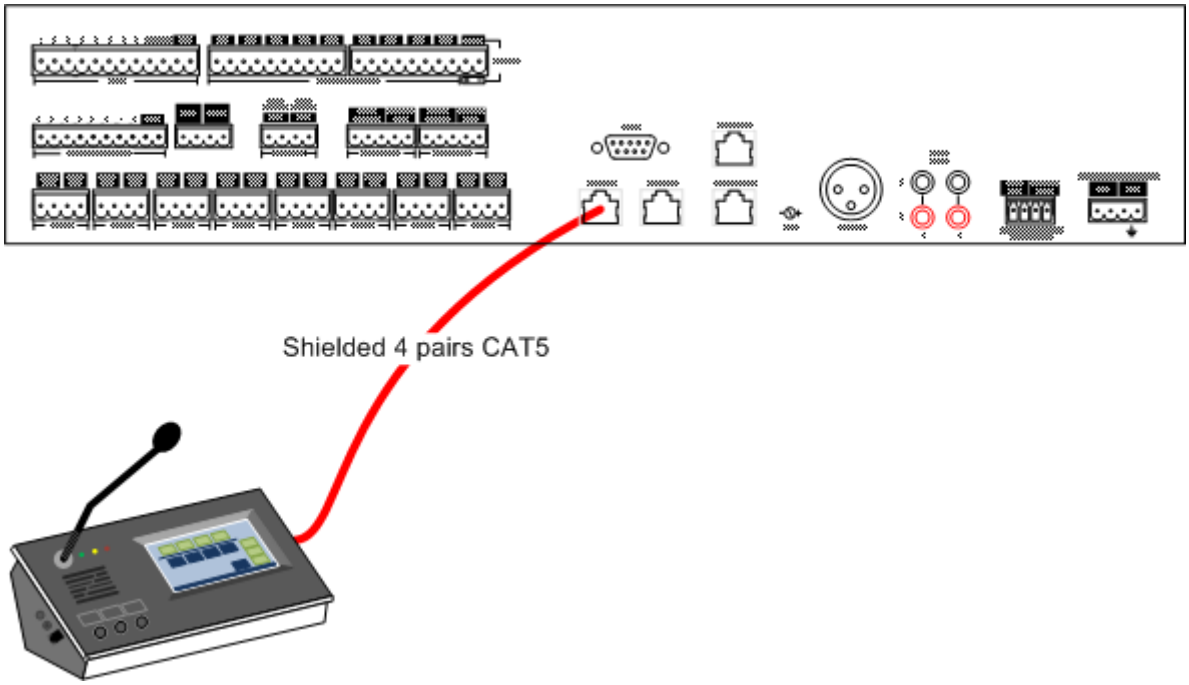
To connect the SHM1 fireman microphone, simply connect the SHM1 connector with the front panel fireman microphone connector. In case of using an other microphone, use the back connector to connect the microphone, see the lower picture.

Note: the front panel connector and the back connector are parallel connected. Please only use one of them.



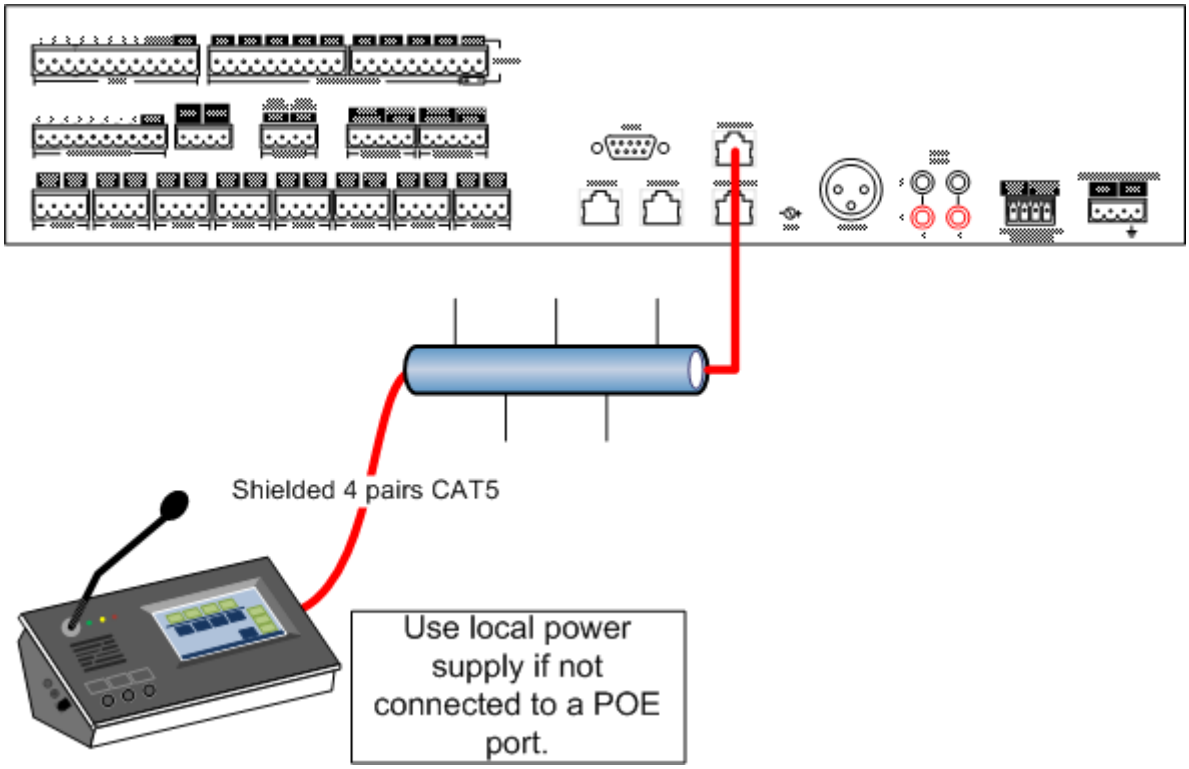
9.47.3. PSSG2 Microphone

In order to connect the PSS or PSSg2 microphone to DIVA, simply use a shielded 4 pairs CAT5 cable to link the PSS/PSM DIVA RJ45 connector to the RJ45 of the PSS. Maximum cable length 200m, if more distance is needed please use a local 24V power supply.



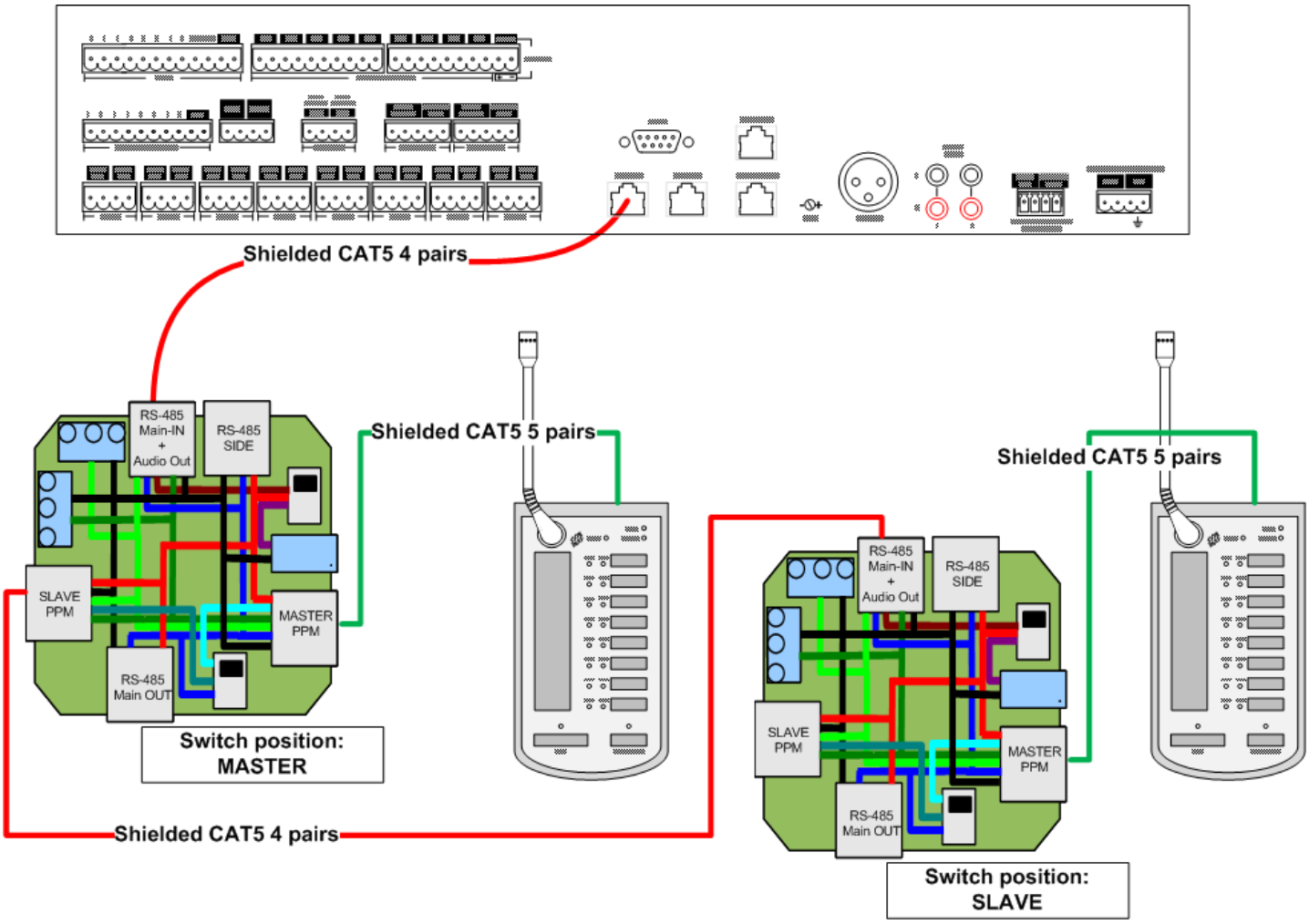
9.47.4. PSSG2-E Microphone

The PSSG2-E can be connected to any TCP/IP port in a network. The PSSG2-E can be powered through POE.



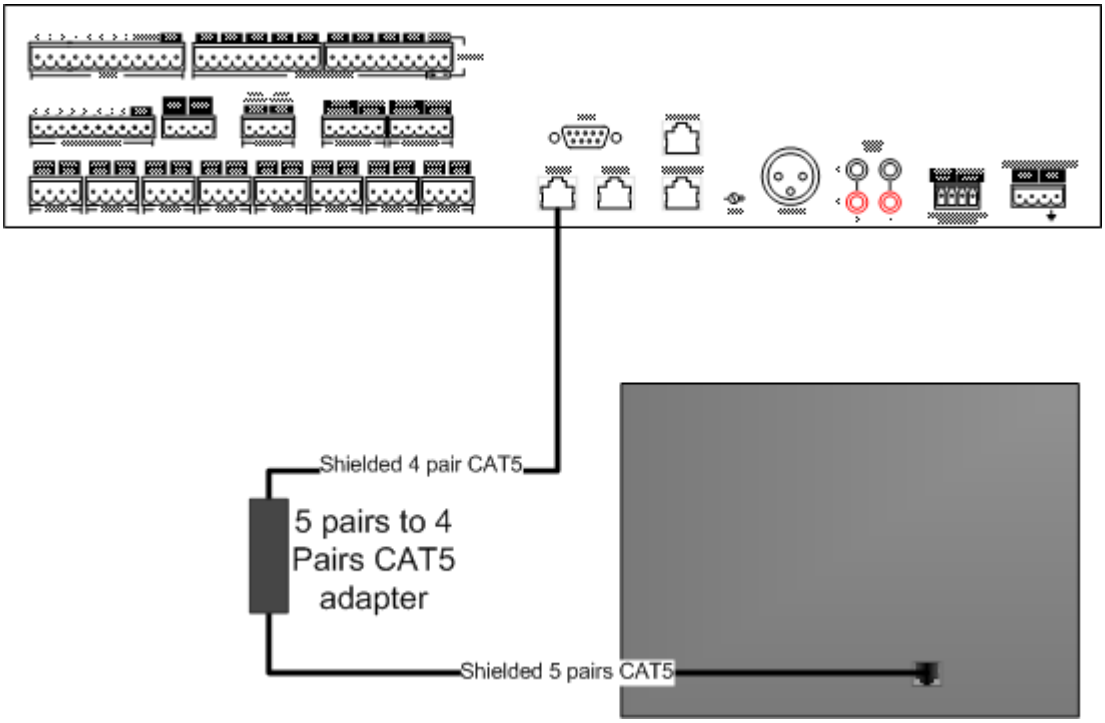
9.47.5. PSM8 Microphone

In order to achieve a PSM cascade, Junction boxes have to be used. The following schematic shows how to cascade two PSM microphones. In order to increase the number of PSM, simply continue the cascading as described.

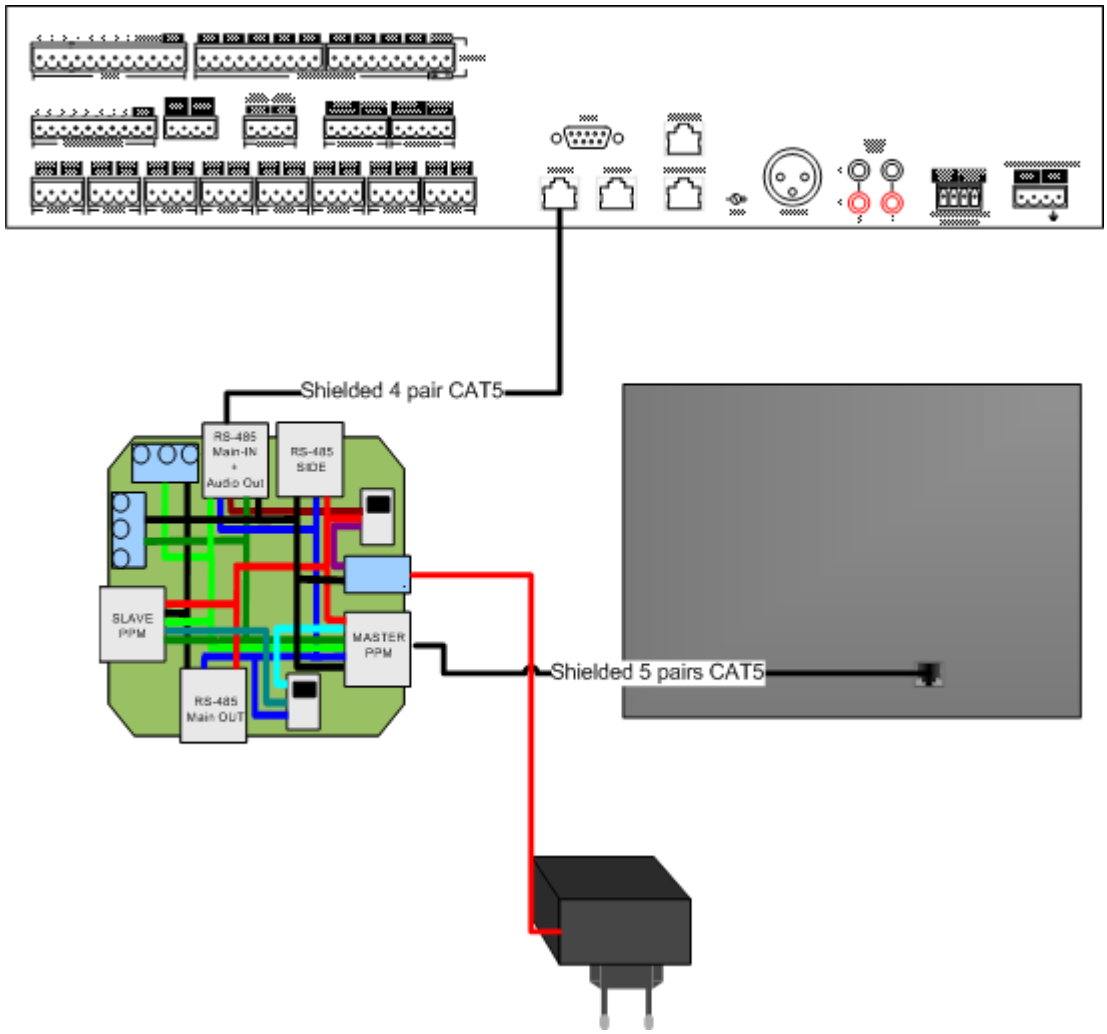


9.47.6. CD16 Microphone

The CD16 wall panel microphone console is considered as a PSM for the DIVA system.

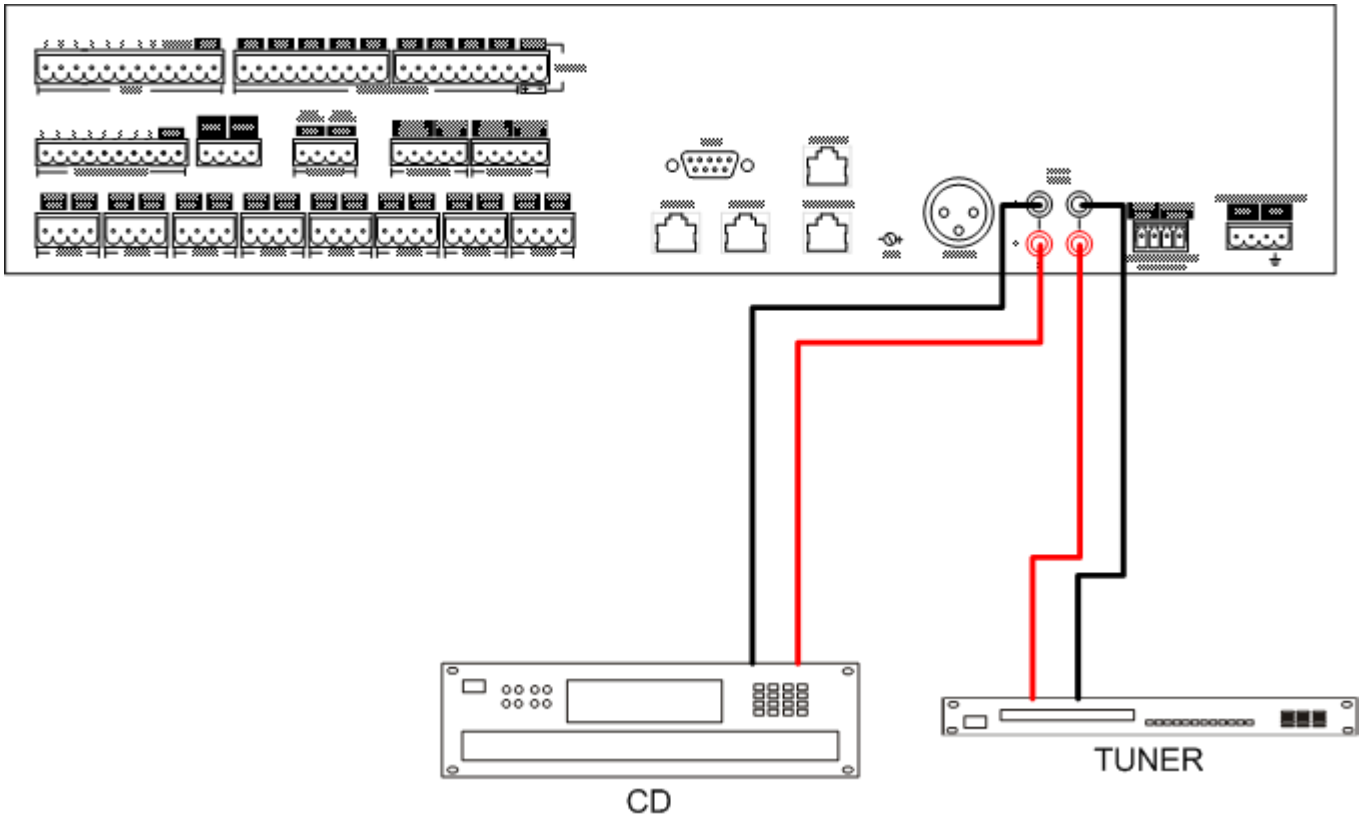


With external power supply due to distance limitation, the use of a junction box is required. The Junction Box should be placed within 80 meters from the CD16 microphone and the junction box power supply switch should be set to EXT.PWR, see picture below.


Shielded 4 pair CAT5
RS-485 Main-IN + Audio Out
RS-485 SIDE
SLAVE PPM
MASTER PPM
RS-485 Main OUT
Shielded 5 pairs CAT5

9.47.7. Music Sources

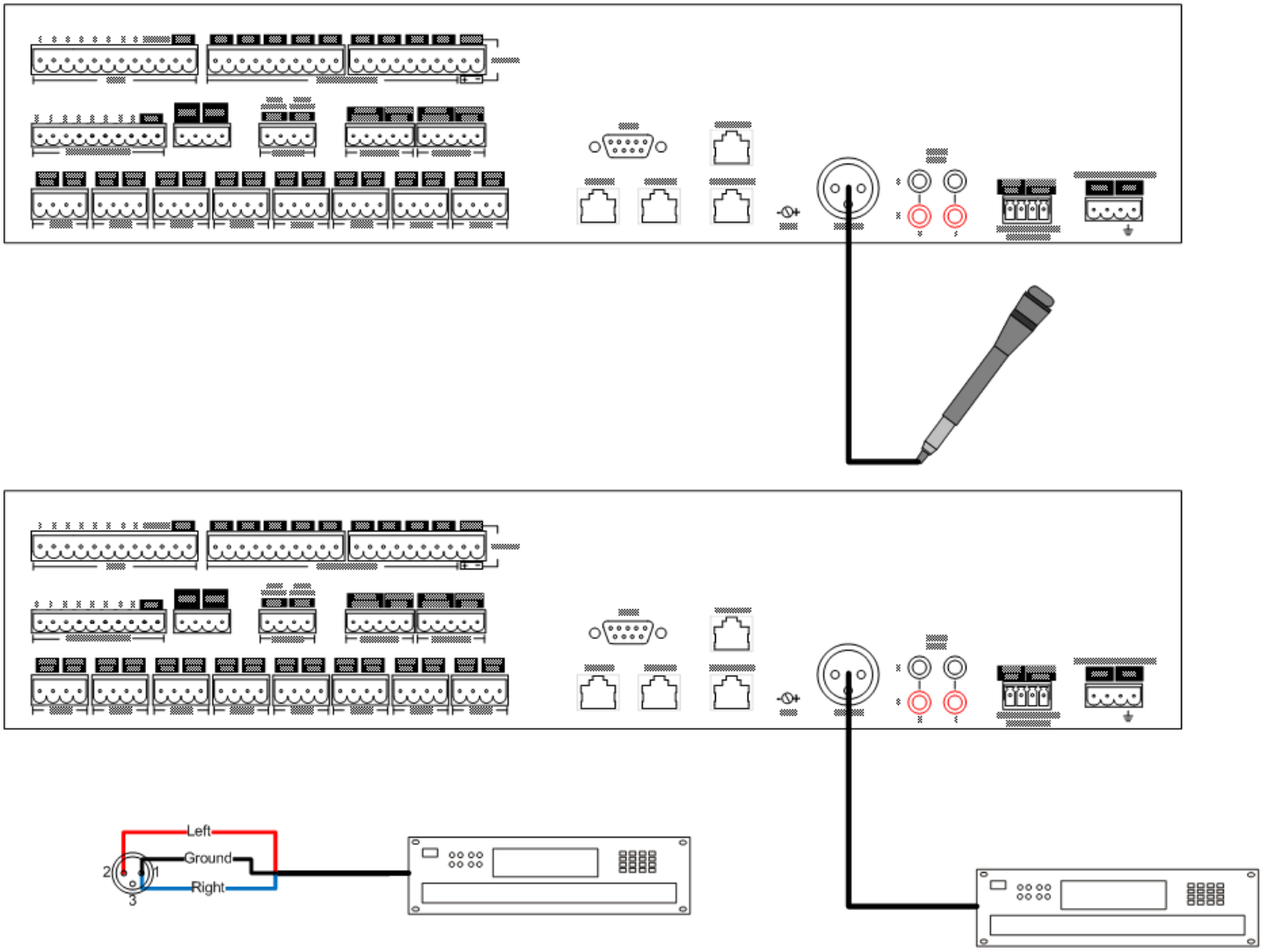
Connecting music sources to DIVA is easy thanks to the CINCH connections. You have a left and right connection for both music sources. Keep in mind, that DIVA is not a stereo player, all music sources are processed in mono.



9.47.8. Mic/Line

The MIC/Line input can be used as a microphone input or as a third music input. According to the schematics below, use an standard XLR cable to link the microphone to DIVA or connect the Left/Right channel of a music source to XLR connector of DIVA.

Note: gain must be adjusted in case of using microphone or a music source.



9.47.9. Amplifier

The connection to amplifier can slightly change according to the amplifier model used.

The 0dB output of DIVA are named as follow:

- AIN+: for positive 0dB output
- AIN-: for negative 0dB output
- GND: for 0dB ground output

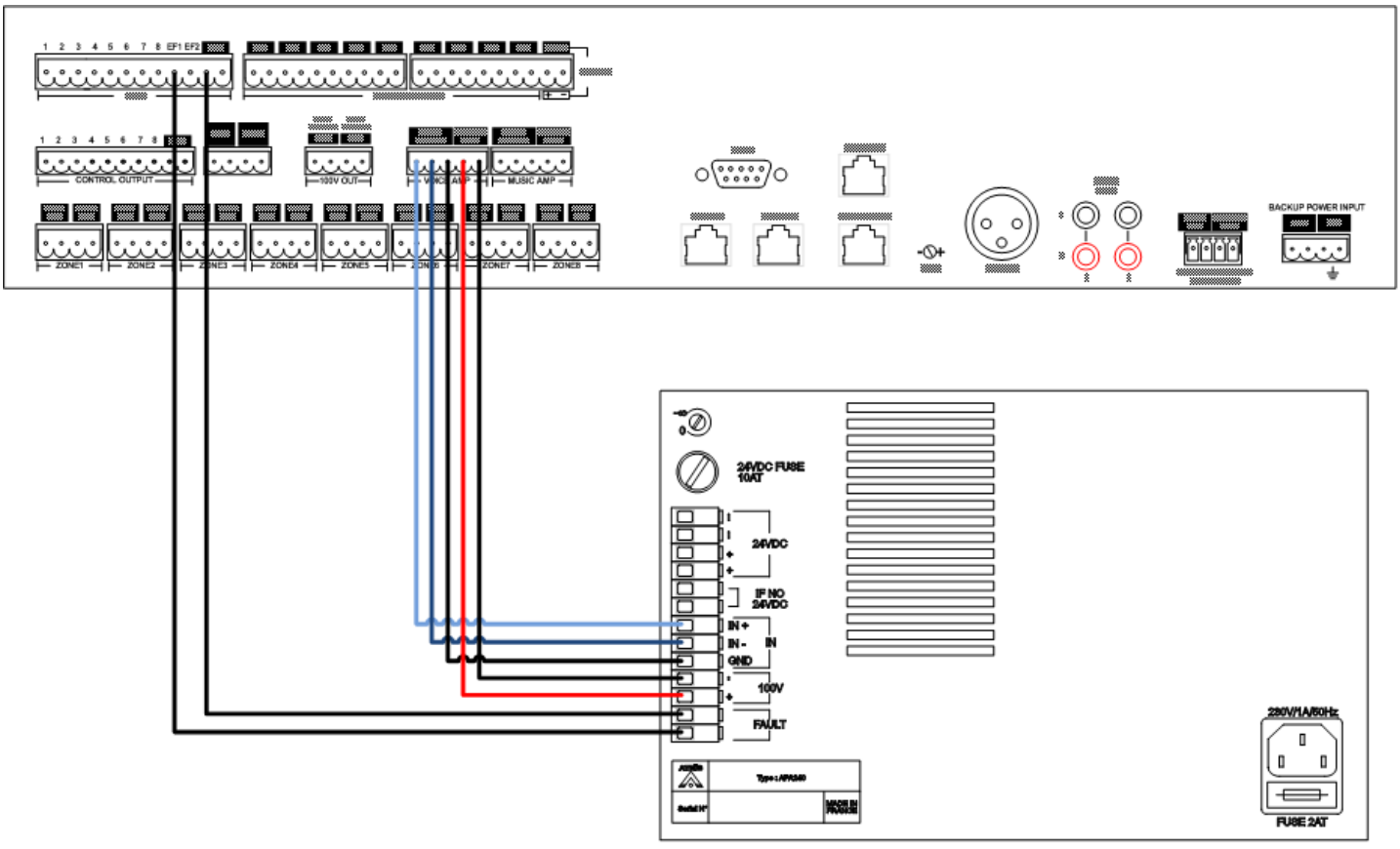
The 100V input are named as follow:

- AOUT+: for positive 100V input
- AOUT-: for negative 100V input

According to the schematic below, the DIVA 0dB output are linked to the amplifier 0dB input and the DIVA 100V input are linked to the amplifier 100V output.

Depending on the configuration needed, you can use the amplifier fault output to force DIVA to enter security mode in case of amplifier failure. To achieve this aim, simply connect the DIVA EXFLT connector to the amplifier's FAULT connector.

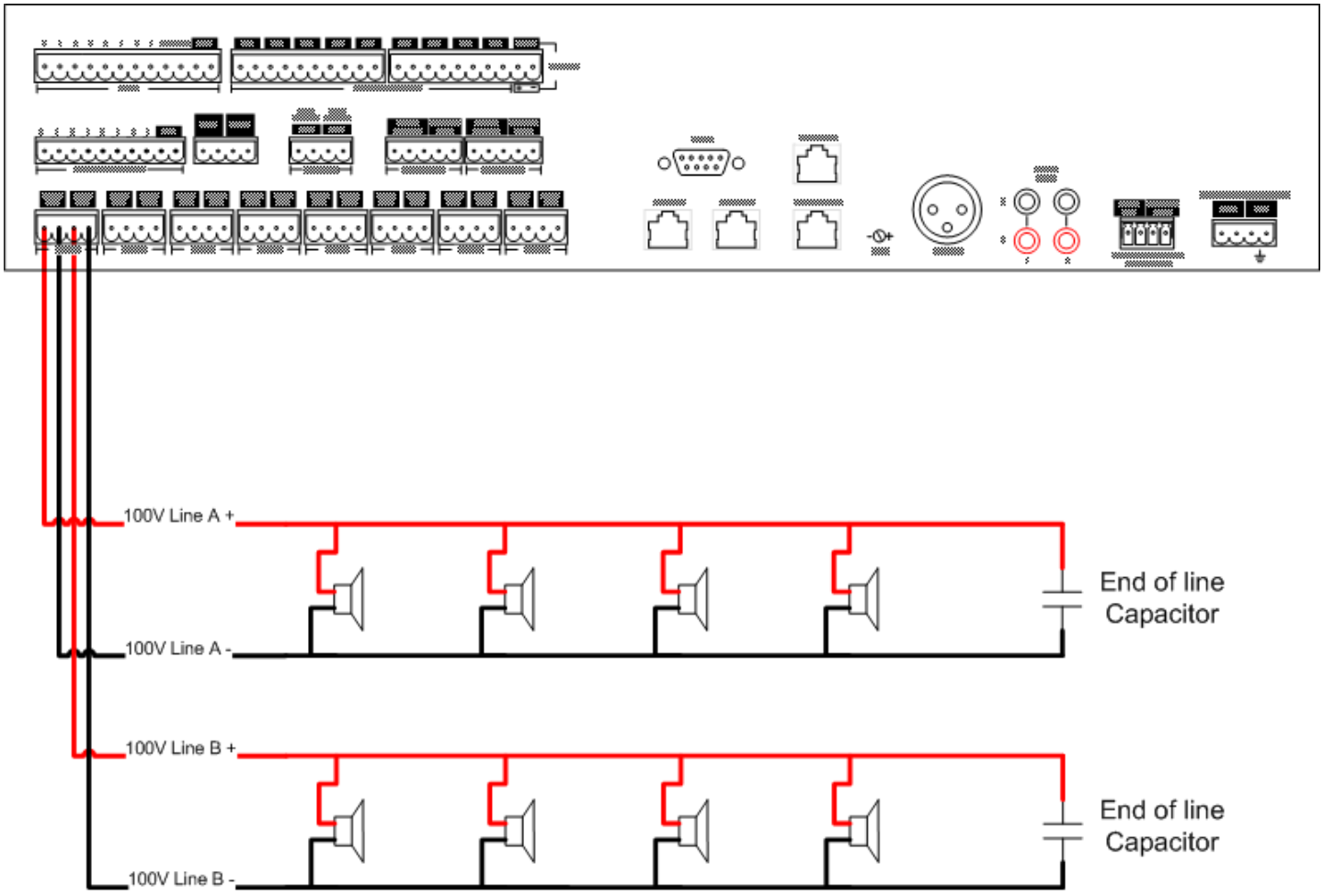
To learn more about amplifier connection, please refer to the amplifier manual.



9.47.10. Speaker Lines

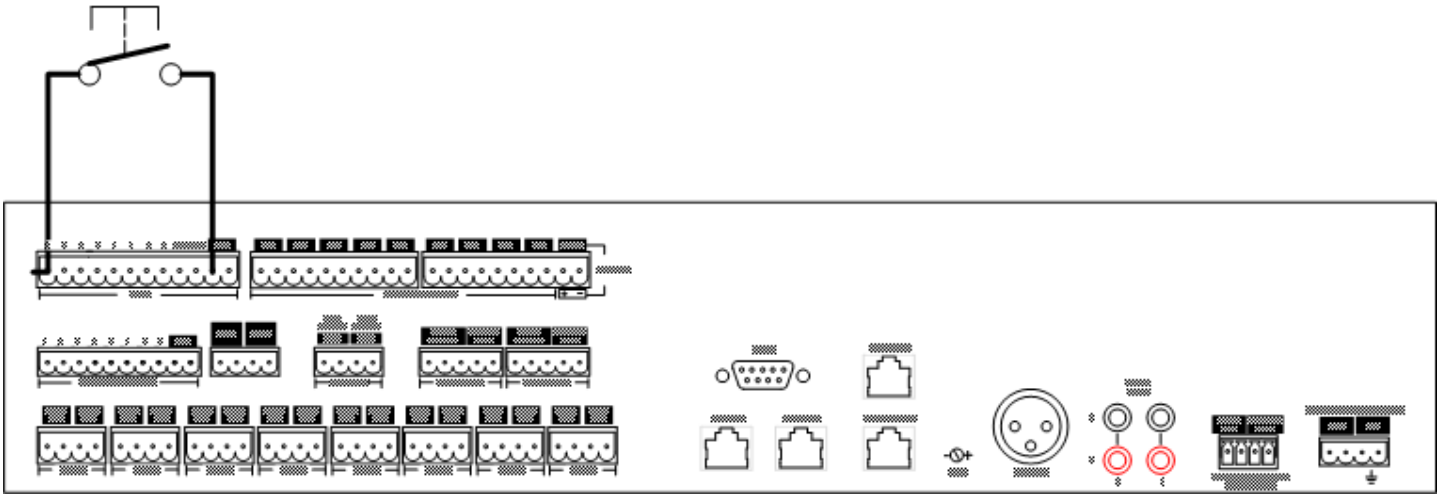
In order to have a high accuracy on impedance measurement, you should add an end of line capacitor on each speaker line. If help is needed to know the value of those capacitors, please take contact with Ateis.

When connecting speakers, take care of the polarity.



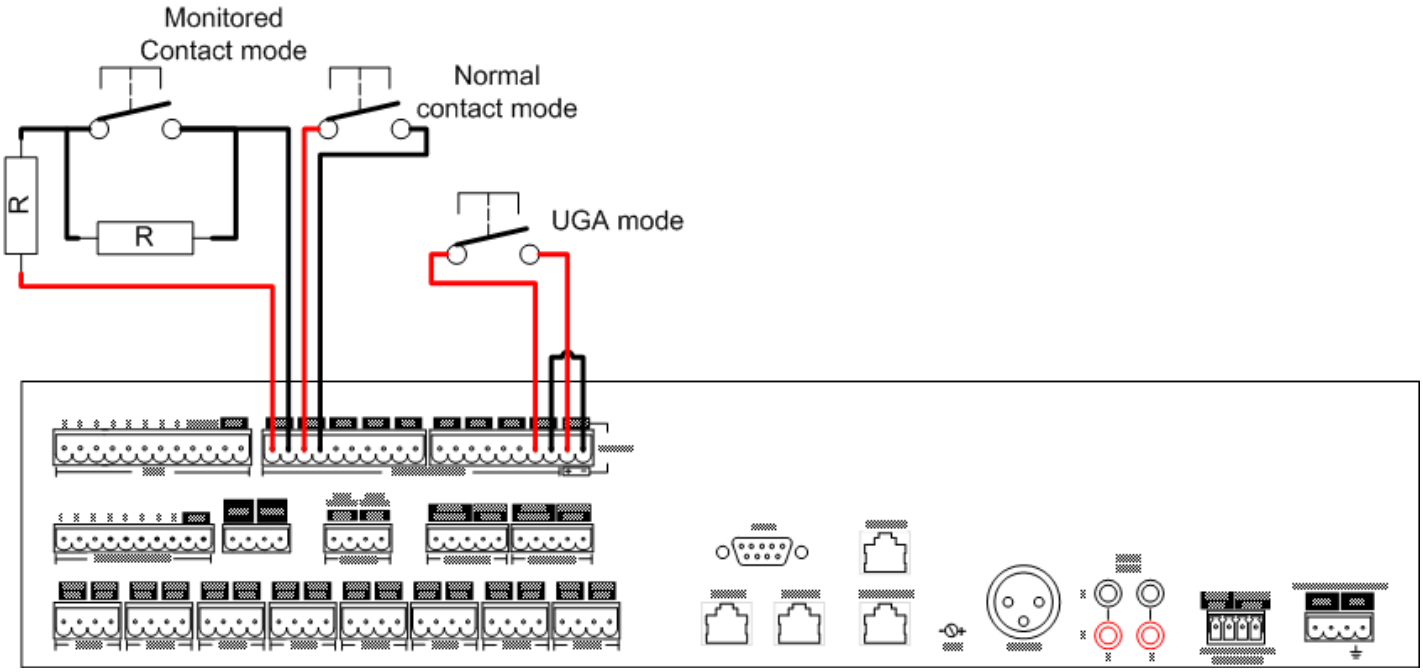
9.47.11. Normal Logic Inputs

Normal logic inputs have been designed to work with simple contact or button. Follow the next schematic to connect a contact to a normal logic input.



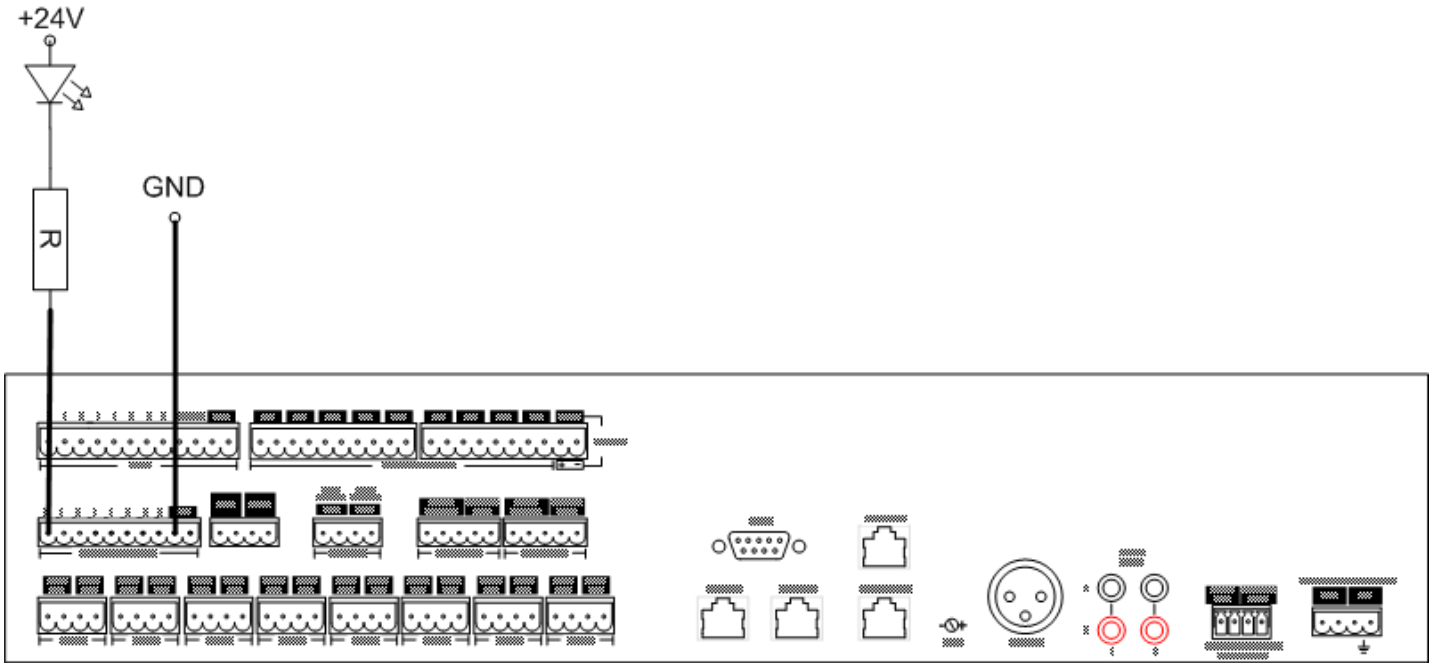
9.47.12. Evacuation Inputs

The evacuation input can be used in three different modes: contact, monitored contact and UGA. The three uses are represented on the schematic below. To learn more about how to perform a monitorable contact, please read this.



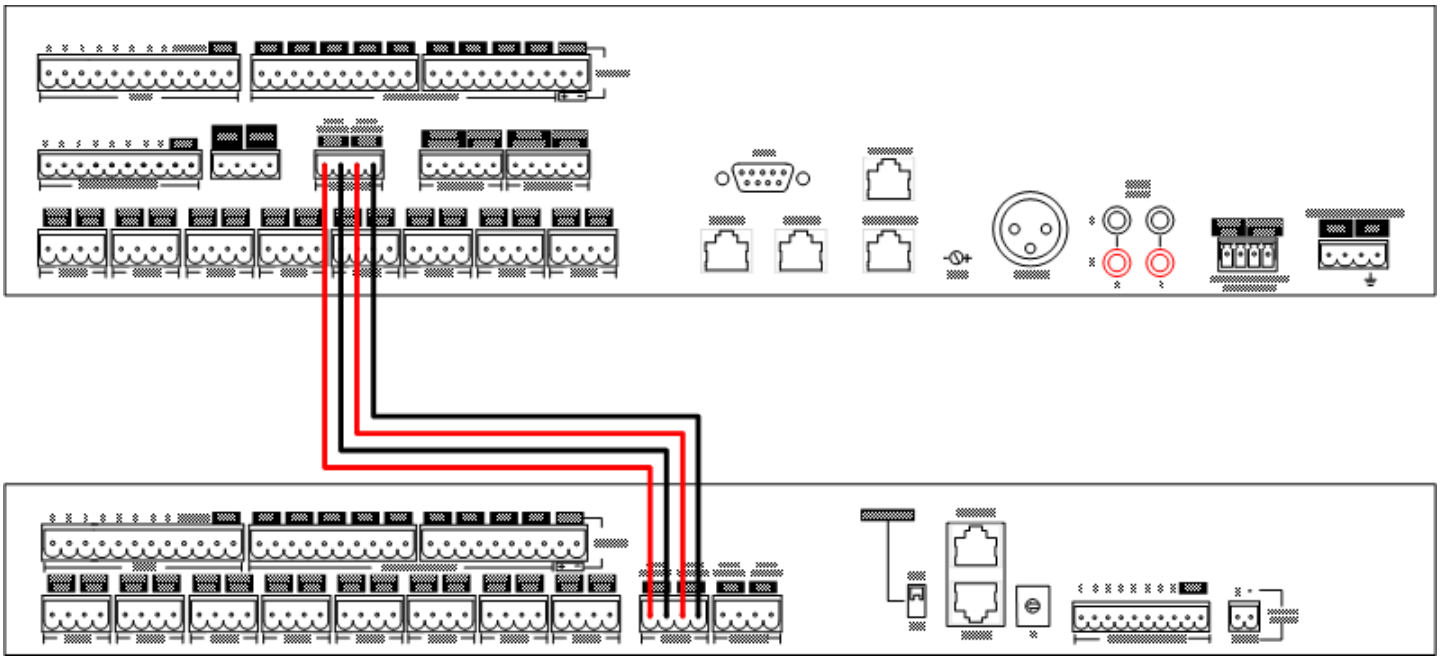
9.47.13. Logic Outputs

Logic output are simple contact that when closing link the OUTPUT connector to the COM connector. The following schematic show a way to create an indicator LED.



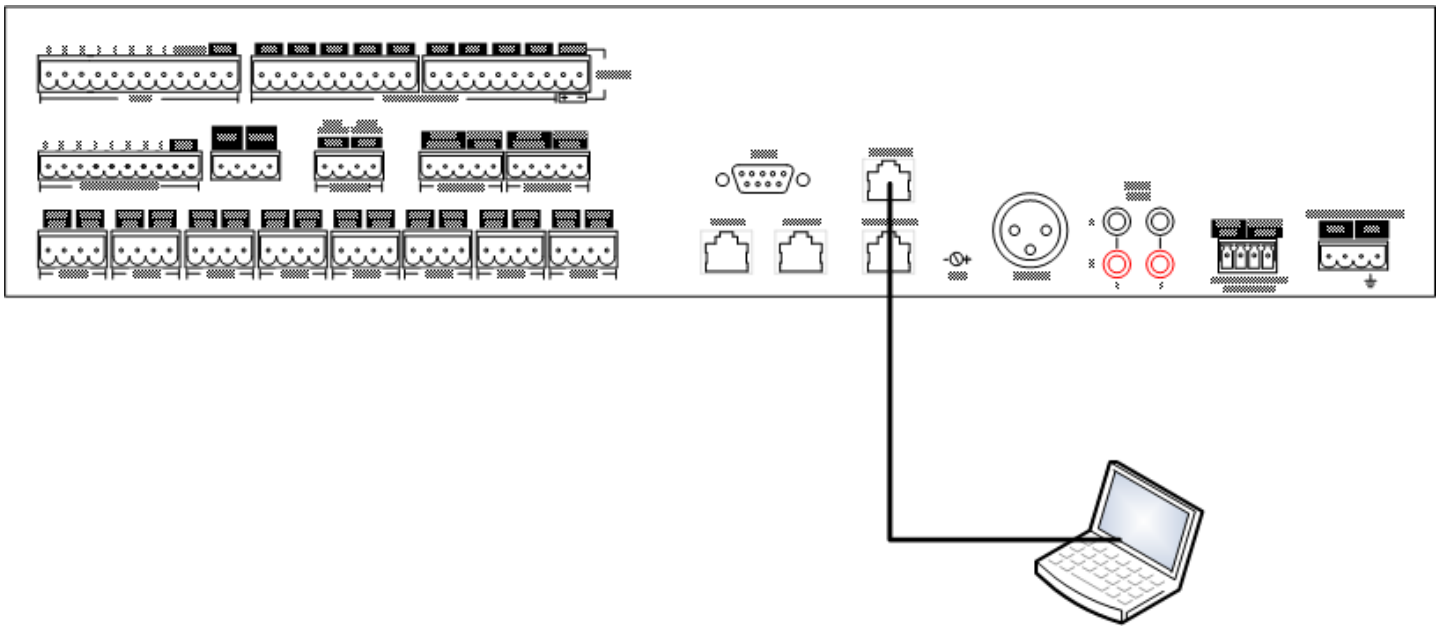
9.47.14. 100V Link Outputs

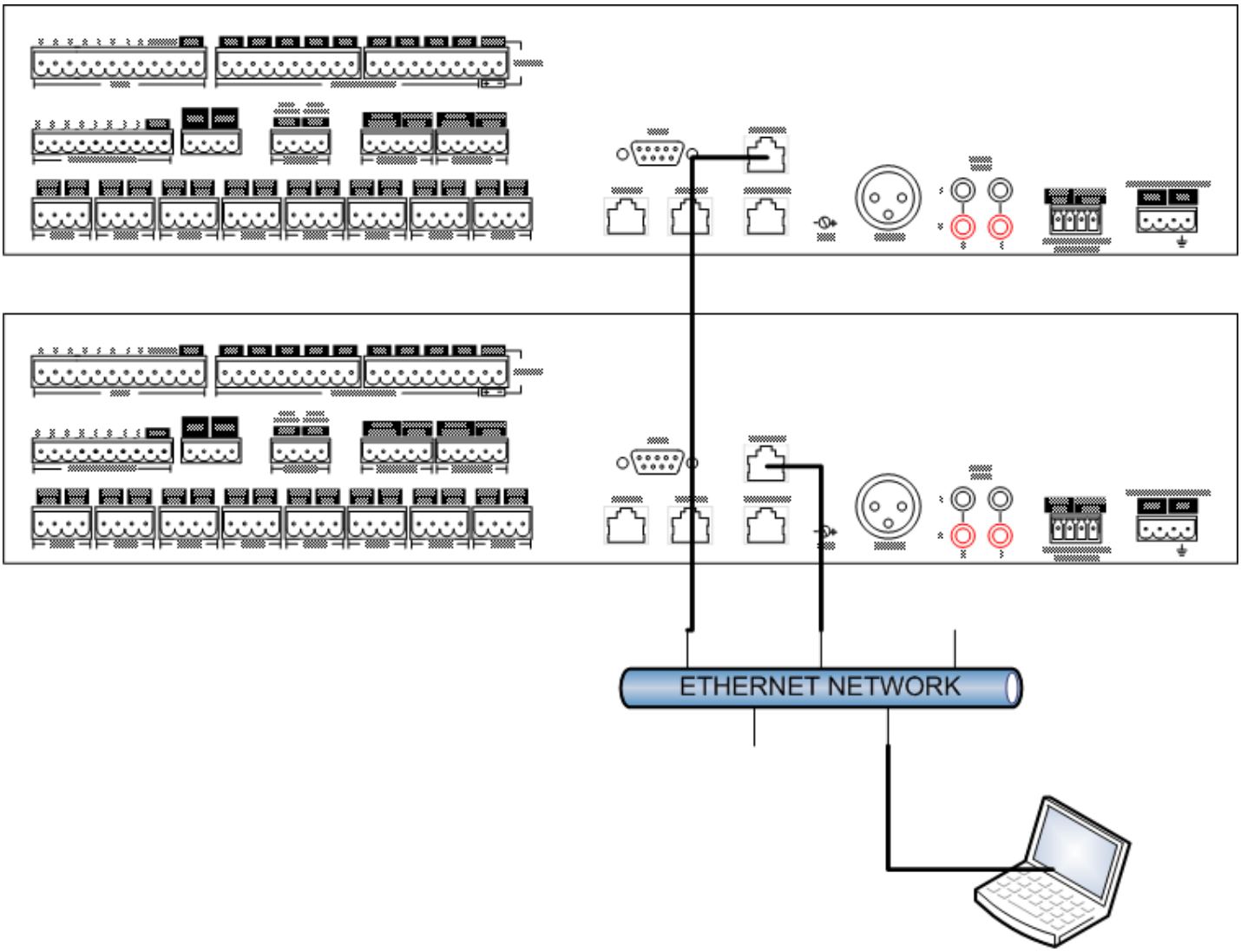
The 100V outputs have been made to link the 100V line from a master DIVA to a slave DIVA. To learn more on how to do the connection between master and slave, please read this.



9.47.15. Computer

The computer can be directly connected to a master DIVA by using a CAT5 cable or can be connected to a ethernet network using the same type of cable. The next two schematics are example on how to connect masters DIVA to a computer.

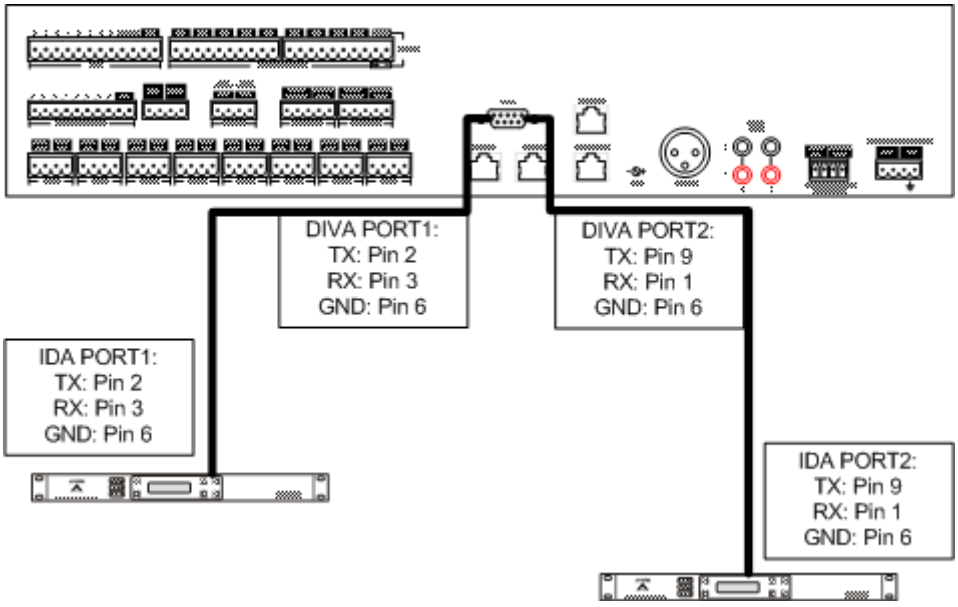



ETHERNET NETWORK

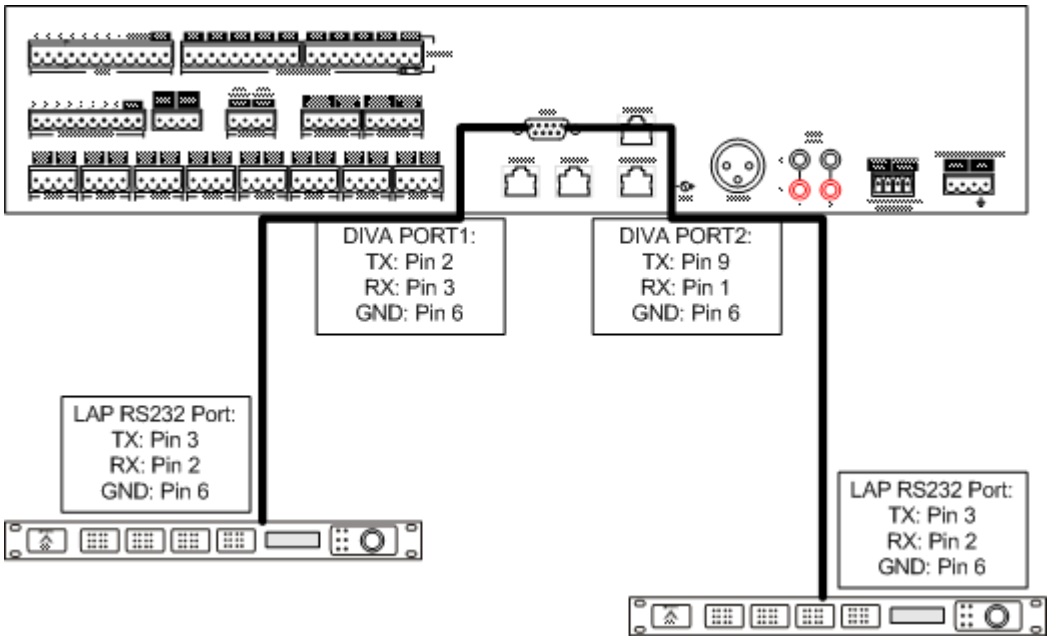
9.47.16. RS232

There are several ways of using DIVA serial port. Here are a few examples. Remember to always cross Tx and Rx, means that Tx from DIVA goes to Rx from a master.

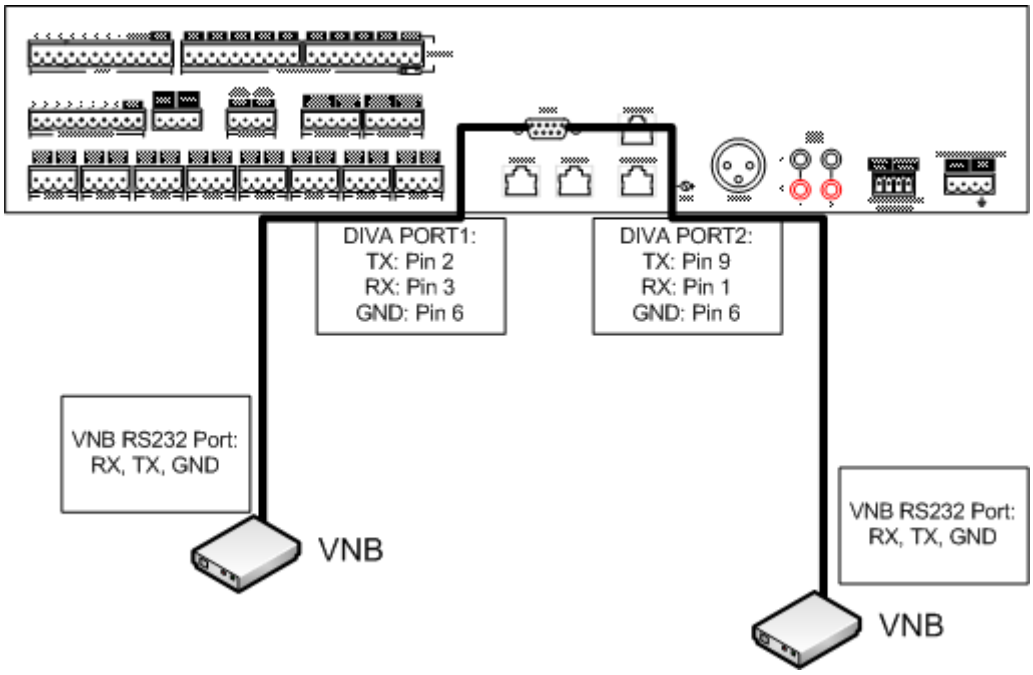
With IDA4M(XM,SW):



With LAP as RS-232 carrier:



With VNB for Vox@Net application or as RS-232 carrier:


DIVA PORT1:
TX: Pin 2
RX: Pin 3
GND: Pin 6
DIVA PORT2:
TX: Pin 9
RX: Pin 1
GND: Pin 6
VNB RS232 Port:
RX, TX, GND
VNB
VNB RS232 Port:
RX, TX, GND
VNB

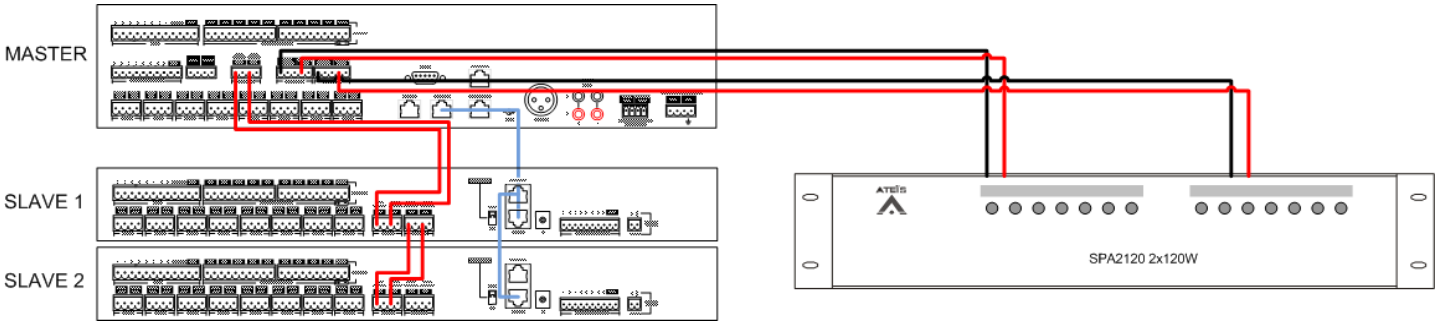
9.47.17. DIVA8S

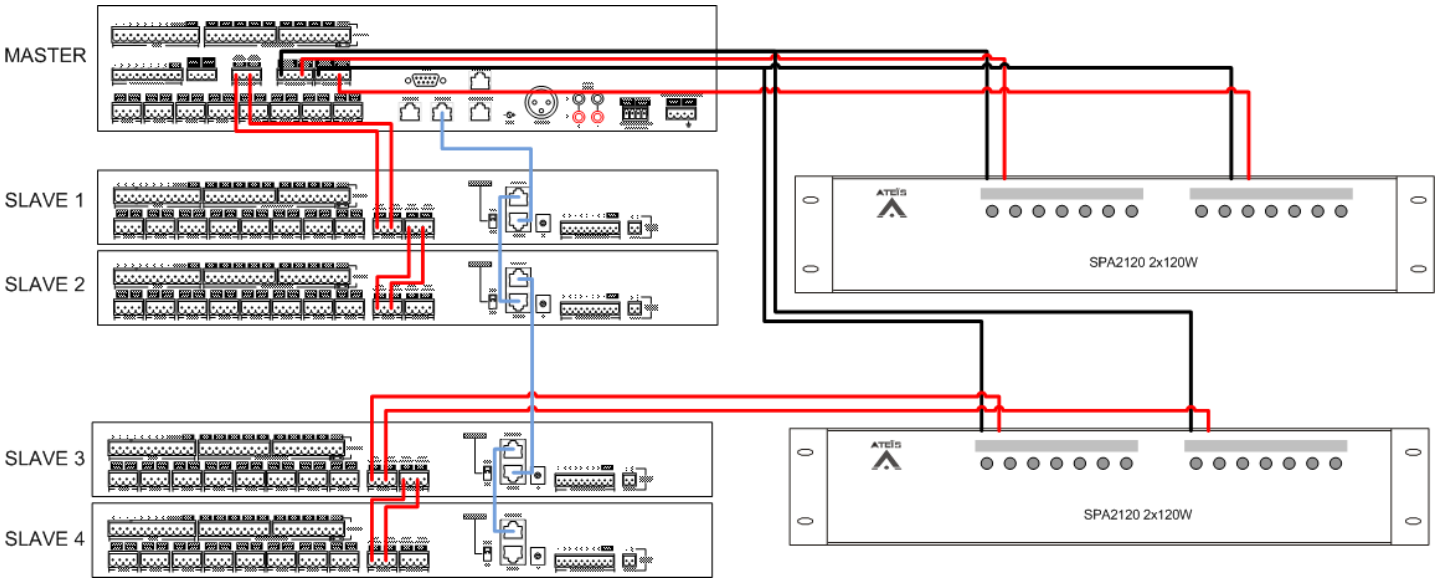
To connect one slave DIVA to a master simply connect the "Link Out" connector of the Master to the "Link In" of the slave with a RJ-45 CAT5 cable and so on for the next slave unit. To pass the audio to the slave unit, simply connect the Master "100V Link" connector to the slave "100V In" connectors. If more than 500W of power is needed, you can add two amplifier channela per slave unit. To synchronize the audio, simply link the OdB output of the master to the additional amplifiers OdB input and additional amplifier 100V output to the corresponding 100V slave input.

The first schematic shows how to perform a DIVA system with 1 master and 2 slave units using the same amplifier.

The second schematic shows how to perform a DIVA system with two additional amplifiers.

On both schematics, the 0dB lines are displayed in black and 100V lines in red. Note: connections are not fully described (example: OdB line is described as one wire instead of 3).a





9.47.18. Remote Panel

Under Construction

9.48. Manage Log File

The Log File records all incident and events happening on the DIVA system. DIVA has been designed to record up to 2047 occurrences.

The Log File can be accessed and managed by either the front panel or inside of the software.

Please read How To Manage Log File From Front Panel or From Software.

9.48.1. From Front Panel

From the front panel, you can read the Log File and clear the Log File.

To read the Log File:

From the FUNCTION MENU:

- Use arrow keys to access the LOG RECORD menu.
- Press OK.

Use arrow keys to display different Log Files occurrences. Note: first occurrence displayed is the latest log file occurrence.

- Log File occurrence are displayed in the following way:
  - First line, occurrence number and date: "XXXX yy/mm/dd"
  - Second line, time and status (Start, end): "hh:mm:ss Status"

- Press OK.
- Log File entry is displayed in plain text on two lines.
- Press Up arrow or Down Arrow keys to go to the previous/next log file occurrence.
- Press ESC to go back to the Log File menu.

For a complete list of Log File entry, please read the Log File Messages List chapter.

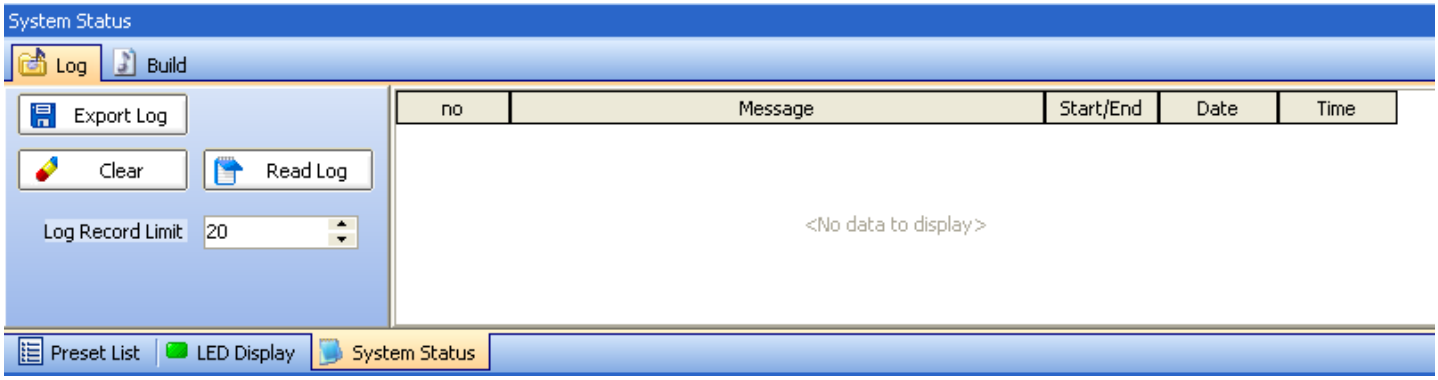
To clear the Log file:

From the FUNCTION MENU:

- Use arrow keys to access the LOG RECORD menu.
- Press OK.
- Use arrow keys to access "Clear Log Files" submenu.
- If you want to delete the Log Files, Press OK.
- You will be asked for validation: "SURE? OK/ESC".
- If Yes, Press OK.
- If No, Press ESC.

9.48.2. From Software

In the software, the log file is accessible either by the menu View -> System Status -> Log or directly by moving the mouse on System Status icon in the Property Control Section bar, see below.

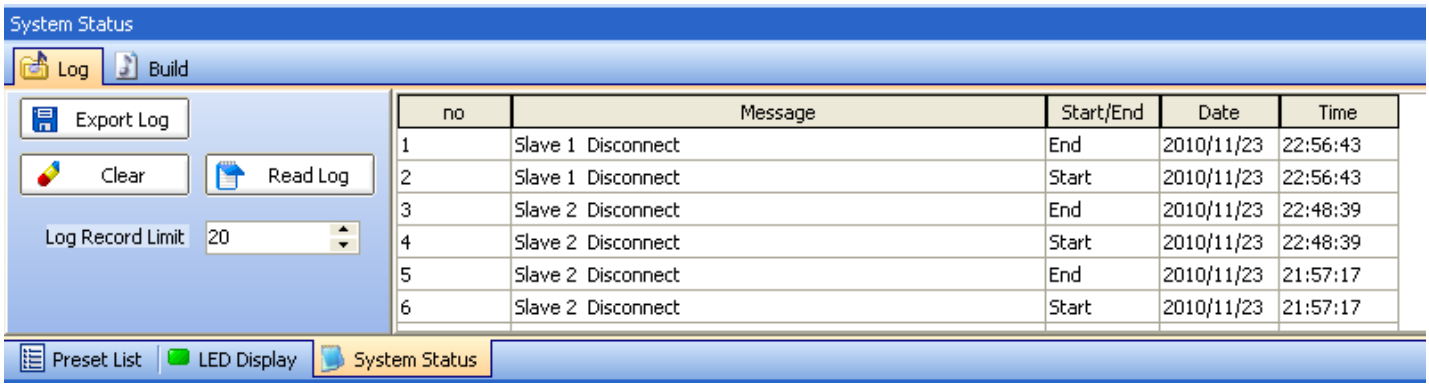


In the Log tab, you will be able to export, read Log File and clear the Log File display.

- **Export Log:** exports the Log File into .txt file.
- **Clear:** deletes the entire Log File content.
- **Read log:** clears the Log File software display.
- **Log Record Limit:** specify the number of Log file occurrence displayed.

In order to read the log file entries, click on the "Read Log" button. **Note:** to be able to read the log file, you have to be real time connected.

If an incident is recorded, it will appear as shown in the following picture.



- **No:** displays the number of the log file occurrence. No 1 is the youngest.
- **Message:** displays the log file message corresponding to the record. For more information about Log file messages, please read this.
- **Start/End:** displays if the incident started or ended.
- **Date:** displays the date at which the event happened.
- **Time:** displays the time at which the event happened.

10. Communication Protocols

This chapter will lead you into the different protocol implemented into DIVA.

- Notifier
- Modbus
- Vox@net

10.1. Notifier

Introduction

The purpose of this document is to clarify the development tasks for communication between ATEIS Voice Alarm System (VAS) and NOTIFIER Fire Panel (FP). This document is based on the NOTIFER Functional Specification – ID3000 Series of Intelligent Fire Alarm Control Panels – Protocol for RS232 link to third-party equipment, and on the different e-mails we exchange during the last weeks.

Physical support

- RS232 interface
- Full-duplex mode (Half-duplex mode will not be developed)
- Baud rate configurable
- 8 data bits
- 1 stop bit
- No parity

Low-level Data Protocol

Transmission from Fire Panel to Voice Alarm System

- Start character ”>” 0x3E
- Identifier character “I” 0x49
- Body of message Sequence of printable characters
- End character 1 “CR” 0x0D
- End character 2 “LF” 0x0A

Transmission from Voice Alarm System to Fire Panel

- Start character “>” 0x3E
- Identifier character “I” 0x49
- Body of message Sequence of printable characters
- End character “CR” 0x0D

The maximum message length (including start and end characters) is 128 characters.

Full-duplex mode

Transmission from Fire Panel to Voice Alarm System

- No echo is expected, because of the checksum
- A checksum is included in the message, just before the end characters

Transmission from Voice Alarm System to Fire Panel

- Each character sent, including start and end characters, is echoed by the panel
- No checksum is expected, because of the echo

Checksum

The checksum is the sum of ASCII codes for all the characters in the message from the identifier character “I”, up to the character immediately preceding the first checksum character, inclusive.

Cyclical communication

Voice Alarm System sends the following message to Fire Panel each 30 seconds. The Fire Panel answers with the Panel Status Message. The bit 2 FAULT is checked by the Voice Alarm System to display the message FIRE PANEL FAULT.

- Request VAS “>” “I” “V” “M” “02” “CR”
- Response FP “>” “I” “V” “S” “PN1” “SW4” “02” “CS2” “CR” “LF”

With	PN1	Panel Number	1 character (value 0)
	SW4	Status Word	4 characters
	CS2	Checksum	2 characters

Virtual point command

Fire Panel sends the following message if it wants to activate or deactivate an evacuation input on Voice Alarm System.

- Command FP “>” “I” “V” “C” “PN2” “VN3” “SP” “VC3” “CS2” “CR” “LF”
- Response VAS “>” “I” “V” “P” “VN3” “SP” “VS3” “SP” “00000” “CR”

With	PN2	Panel Number	2 characters (value 0)
	VN3	Evacuation Input	3 characters
	SP	ASCII Space	1 character (value 0x20)
	VC3	Command Code	3 characters
	CS2	Checksum	2 characters
	VS3	Status Code	3 characters

If the Command Code is 001 or 002, the Voice Alarm System will give no response, because of the fact that these messages are only informative messages.
Messages with Command Code 005 will not be interpreted. Only the “Mode 1” should be used to activate an Evacuation Input.
If the Command Code is 006 and the Evacuation Input is 000, the number of Voice Alarm System responses depends on the number of faulty Evacuation Inputs.

Command Code Description

000	No action, enquire status only
001	Evacuation Input has been enabled – informative only
002	Evacuation Input has been disabled – informative only
003	Deactivate the Evacuation Input
004	Activate the Evacuation Input (Mode 1)
005	Activation in mode will not be interpreted
006	Retransmit fault or unavailable message(s) for the Evacuation Input(s)

Status Code Description

000	Evacuation Input not defined within Voice Alarm System
001	Evacuation Input inactive
002	Evacuation Input waiting to go inactive after deactivate command
003	Evacuation Input request to go inactive denied
004	Evacuation Input active (mode 1)
005	Evacuation Input waiting to go inactive after activate command
006	Evacuation Input request to go active denied

Status change message

Voice Alarm System sends this message in case of Evacuation Input status change (fault or out of fault, unavailable or returned to available).

- Message VAS “>” “I” “V” “P” “VN3” “SP” “VS3” “SP” “00000” “CR”
- Response FP “>” “I” “A” “C” “K” “CR” “LF”

With	VN3	Evacuation Input	3 characters
	SP	ASCII Space	1 character (value 0x20)
	VS3	Status Code	3 characters

Status Code Description

010	Evacuation Input fault
011	Evacuation Input out of fault
012	Evacuation Input unavailable
013	Evacuation Input returned to available

Communication fault action

Cyclical communication or Status change message

- ~~1's complement of the last received character~~
- Error on the last received character's echo
- Timeout on echo character reception (1 second)

Voice Alarm System sends a "ESC" character ~~and retries 10 times to send its message. After 10 retries, Voice Alarm System displays "Communication fault with Fire Panel"~~.

- "\" "CR" "LF" message
- Checksum error on response message
- Timeout on response message reception (5 seconds)

Voice Alarm System retries 10 times to send its message.
After 10 retries, Voice Alarm System displays "Communication fault with Fire Panel".

Virtual point command

- ~~1's complement of the last received character~~
- Error on the last received character's echo
- Timeout on echo character reception (1 second)

Voice Alarm System sends a "ESC" character.

- Checksum error on command message

Voice Alarm System sends the NAK message ">" "I" "N" "CR".

10.2. Voc@net/Modan

This document describes Vox@net/MODAN protocol, used for remote control applications.

Written by R. Seassau

The Modan protocol is intended to provide communication between two public address and/or voice alarm systems. One system is declared as master, and the other as slave, and with this protocol, the master can send announcement request to the slave and also get status/faults informations from the slave. At the beginning, this protocol has been developed for point to point link, but a multipoint extension has been added (1 master and more than 1 slave). All the units must handle both modes.

The physical layer is composed of 1 to 4 audio channels (mostly 0dB) from the master to the slave, and a regular RS232/422/485 serial link between master and slave. In case of multipoint configuration, serial link can be RS485 (with proper 232/485 interfaces if needed), or any suitable data network.

Serial link default values are 9600 bauds, even parity, 8 bits, 1 stop

Definitions: **STX=2, ETX=3, CR=13, ACK=6, DLE=16, NACK=21, SP=32, ENQ=5**
with all values in decimal.

Upper case symbols are fixed.

POINT TO POINT PROTOCOL DEFINITIONS

Commands format: **STX command string ETX CS CR** where CS is the checksum (exclusive or) of all characters of command string. For each command, answer can be **ACK CR** (executed), **DLE + CR** (not executed), **NACK CR** (not understood). The answers are not inserted inside STX…ETX LRC CR frame.

All commands use logical zones (namely codes) to reduce the size of datas exchanged. For a very simple implementation on a small system, code 1 can be output 1 and so on. Generally a code is like a group of zones. Channel refer to 0dB audio signals.

Slave configuration datas:

Channel inputs (4 0dB inputs allocated to channels 1 to 4)
Channel priorities (4 priority levels allocated to channels 1 to 4)
Code zones (groups of zones allocated to codes 1 to 99)

Announcement Request: commandstring = **Pch code1, code2, code3**
For example **P12** means call with channel 1 inside zones grouped on code 2, **P21,3** means call with channel 2 inside zones grouped on codes 1 and 3. If the command is executed, the answer is **ACK CR** (all codes were available) or **DLE + CR** (at least one code was not available for this channel).

Announcement Global Clear: command string = **C ch 0 0**
For example, C100 means clear of announcement running with channel 1. The slave unit must memorize all the time zones requested for announcement for each channel). When a clear command is executed, the answer can be **ACK CR** (all codes were occupied by the channel) or **DLE + CR** (at least one code has been taken by another source).

Announcement partial clear: command string = **L ch code1 , code2 , code3**
For example **L25** means clear zones grouped on code 5 if they are occupied by channel 2, **L41,3** means clear zones grouped on codes 1 and 3 occupied by channel 4. The answer is the same as previous clear command.

Normal level for all the channels: command string = **N000**
The normal level value is setup inside the slave configuration, answer is always **ACK CR**.

Loud level for all the channels: commandstring=**S000**
The loud level value is setup inside the slave configuration, answer is always **ACK CR**.

Reduced level for all the channels: commandstring=**A000**
The reduced level value is setup inside the slave configuration, answer is always **ACK CR**.

Date and time setting: command string = **Hddmmyyhhmmss**
where dd is day, mm is month, yy is year, hh=hour, mm=minutes, ss=seconds

Status/Fault request: command string = **E**
Answer is the string: **Eedusdus…**
where **e** is the global state of the slave (**space** for no fault, **D** for deferred fault, **I** for immediate fault), **du** is a code number (dozens and units, always 2 digits) and **s** is the status of this code, a character with this binary format: **0010LBID** where L is set if the code is occupied by a local source of the slave, B is set if the code is occupied by the modan source, I is set if at least one zone of the code is in immediate fault, and D is set if at least one zone of the code is in deferred fault.

The codes are the ones which are setup in the slave configuration (only codes with at least 1 zone allocated to it).

Examples (codes 5 and 12):	Answer
No global fault, all codes free with no fault	**E SP 0 5 SP 1 2 SP**
Immediate global fault, all codes free with no fault	**E I 0 5 SP 1 2 SP**
Deferred global fault, all codes free with no fault	**E D 0 5 SP 1 2 SP**
No global fault, code 5 occupied by local source	**E SP 0 5 (1 2 SP**
No global fault, code 12 occupied by modan source	**E SP 0 5 SP 1 2 $**
Immediate global fault, code 5 immediate fault and local busy	**E SP 0 5 * 1 2 SP**

In point to point version of the protocol, the slave must send status/fault report by itself, each time status/fault is changing.

MULTIPOINT PROTOCOL DEFINITIONS

Slave Address is added in each command, with 2 characters just after the STX character. Legal values are 00 (master), 01 to 98 (slaves), 99 (all slaves, not used for the moment). Only the slave whose address is matching the address added will answer, and must add the master address 00 inside the status/fault report. Slaves must not send by it selves status/fault reports.

Examples:	Command	Answer
Call on slave #2, channel 1 to code5	**02P15**	**ACK CR** or **DLE + CR**
Free channel 3 on slave #1	**01C300**	**ACK CR** or **DLE + CR**
Get status of slave #4	**04E**	**0 0 E SP 0 5 SP 1 2 SP**

A new Enquiry command is added to the protocol, to optimize detection of absent slaves:

ENQ 0 2 means that the master wants to know if the slave #2 becomes again present. In this case the slave #2 answers **ACK CR.**

10.3. Modbus

The MODBUS application protocol is a well-known industry standard.

You can download the protocol specification here:
http://www.http://www.modbus.org/docs/MODBUS_Application_Protocol_V1_1b.pdfMODBUS.org/docs/MODBUS_Application_Protocol_V1_1b.pdf

DIVA master act as a slave in RTU mode (binary), either on serial port or IP.
The implementation is based on a register table only.

It accepts the following public function codes:
0x03 *Read holding registers*
0x04 *Read input registers*
0x06 *Write single register*
0x10 *Write multiple registers*

And it may answer with the following exception codes:
0x01 *Illegal Function*
0x02 *Illegal Data Address*
0x03 *Illegal Data Value*

Diva supports slave units number in its configuration file (this number is sent inside each command to modbus slaves). The frames received are triple checked:
communication level, no answer if unit number is not the one set in DIVA
protocol level, according to MODBUS specifications (exception codes)
application level, according to the table supported (command/acknowledge)

All the registers are holding datas formatted as words (16 bits), and they form a table which maximum size is 64kwords. The table is divided in two parts: states and command/parameters.

The states of DIVA (faults, busy,…) can be get simply by reading the matching registers.

To trigger an action inside DIVA, the parameters must be set first, then the command register. If action is valid (ex: priority ok for a paging), then the command register is set to 0. If not, the command register is set to a negative value.

STATES TABLE

ADDRESS	REGISTER
0x0001	GLOBAL STATUS
0x0002	GLOBAL STATUS CHANGE
0x0003	PSS FAULTS
0x0004	INTERNAL FAULTS
0x0005	MESSAGE SIZE
0x0006~0x000D	MESSAGE NAME #1
0x000E	MESSAGE FAULT #1
0x000F	MESSAGE LEVEL #1
…..	…...
0x09FB	MESSAGE LEVEL #255
0x09FC~0x0A03	LOGIC INPUT STATES 1~8
0x0A04	AUDIO INPUTS DETECTION STATES
0x0A05~0x0A0D	EVACUATION INPUT STATES 1~9
0x0A0E~0x0A15	LOGIC OUTPUT STATES 1~8
0x0A16~0x0A95	ZONE SOURCE STATE 1~128
0x0A96~0x0B15	ZONE FAULT STATE 1~128
0x0B16	SCHEDULER SIZE
0x0B17	SCHEDULER SECONDS #1
0x0B18	SCHEDULER MINUTES #1
0x0B19	SCHEDULER HOURS #1
0x0B1A	SCHEDULER DAY #1
0x0B1B	SCHEDULER MONTH #1
0x0B1C	SCHEDULER YEAR #1
0x0B1D	SCHEDULER DIVA EVENT #1
0x0B1E ~ 0x0B25	SCHEDULER NAME #1
…..	…..
0x128F ~ 0x1296	SCHEDULER NAME #128
0x1297	AMPLIFIERS FAULTS
0x1298	FIREMEN SOURCES LEVEL
0x1299	PSS SOURCES LEVEL
0x129A	MIC / LINE SOURCES LEVEL
0x129B	MUSIC 1 SOURCES LEVEL
0x129C	MUSIC 2 SOURCES LEVEL
0x129D	WATCHDOG OUTPUT
0x129E	EVENT TYPE #1
0x129F ~ 0x12A6	EVENT NAME #1
…..	…..
0x1715	EVENT TYPE #128
0x1716 ~ 0x171D	EVENT NAME #128

GLOBAL STATUS 0x0001

Bit	Mask	Name	Description
0	0x0001	GIF	Immediate Fault
1	0x0002	GES	Evacuation State

GLOBAL STATUS CHANGE 0x0002

Bit	Mask	Name	Description
0	0x0001	GFC	Fault Change
1	0x0002	GBC	Busy Change

PSS FAULTS 0x0003

Bit	Mask	Name	Description
0	0x0001	VPA	Pre-Amplifier fault
1	0x0002	VIN	Speaker line DC polarization fault
2	0x0004	VMIC	Microphone fault
3	0x0008	VOUT	Audio output fault
4	0x0010	LCD	LCD fault
5	0x0020	KEY	Touchpad/Keyboard fault
6	0x0040	AUD	Microphone line DC polarization fault
7	0x0080	TO	Time Out – PSS missing

INTERNAL FAULTS 0x0004

Bit	Mask	Name	Description
0	0x0001	IFA	ADC/DAC converter
1	0x0002	IFF	Flash memory
2	0x0004	IFR	Ram memory
3	0x0008		RTC
4	0x0010		ADS7830 Evac Input
5	0x0020		PCF8574 Function LED
6	0x0040		ADS7830 Internal input
7	0x0080		PCF8574 Logic input
8	0x0100		PCF8575 Front panel keys
9	0x0200		SAA1064 Front panel zones LED

MESSAGE SIZE 0x0005

Bit	Description
0~15	Number of existing message

MESSAGE NAME

Bit	Description
0~15	Audio message name 1~255 (16 ASCII)

MESSAGE FAULT

Bit	Description
1~15	Audio messages fault 1~255 (0 = normal; 1 = fault)

MESSAGE LEVEL

Bit	Description
1~15	Audio message level 1~255

LOGIC INPUTS STATE 0x09FC~0x0A03

Address	Bit	Mask	Description
0x09FC	1~15	0x0001~0x8000	Bit field inputs logic input 1~16 (0 = Normal; 1 = Trigger)
0x09FD	1~15	0x0001~0x8000	Bit field inputs logic input 17~32 (0 = Normal; 1 = Trigger)
0x09FE	1~15	0x0001~0x8000	Bit field inputs logic input 33~48 (0 = Normal; 1 = Trigger)
0x09FF	1~15	0x0001~0x8000	Bit field inputs logic input 49~64 (0 = Normal; 1 = Trigger)
0x0A00	1~15	0x0001~0x8000	Bit field inputs logic input 65~80 (0 = Normal; 1 = Trigger)
0x0A01	1~15	0x0001~0x8000	Bit field inputs logic input 81~96 (0 = Normal; 1 = Trigger)
0x0A02	1~15	0x0001~0x8000	Bit field inputs logic input 79~112 (0 = Normal; 1 = Trigger)
0x0A03	1~15	0x0001~0x8000	Bit field inputs logic input 113~128 (0 = Normal; 1 = Trigger)

AUDIO INPUTS DETECTION STATES 0x0A04

Bit	Mask	Description
0	0x0001	MIC/LINE Input
1	0x0002	MUSIC 1 Input
2	0x0003	MUSIC 2 Input

EVACUATION INPUT STATES 0x0A05~0x0A0D

Bit	Mask	Description
0~15	0x0001~0x8000	Bit field evacuation inputs 1~16 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 17~32 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 33~48 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 49~64 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 65~80 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 81~96 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 79~112 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 113~128 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field evacuation inputs 129~144 (0 = Normal; 1 = Trigger)

LOGIC OUTPUT SATES 0x0A0E~0x0A15

Bit	Mask	Description
0~15	0x0001~0x8000	Bit field logic outputs 1~16 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field logic outputs 17~32 (0 = Normal; 1 = Trigger)

0~15	0x0001~0x8000	Bit field logic outputs 33~48 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field logic outputs 49~64 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field logic outputs 65~80 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field logic outputs 81~96 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field logic outputs 79~112 (0 = Normal; 1 = Trigger)
0~15	0x0001~0x8000	Bit field logic outputs 113~128 (0 = Normal; 1 = Trigger)

ZONES SOURCE STATE 1~128, 0x0A16~0x0A95

Bit	Mask	Name	Description
0~7	X		
8	0x0100	ZSFM	Firemen microphone
9	0x0200	ZSML	Mic/Line
10	0x0400	ZSMC1	Music 1
11	0x0800	ZSMC2	Music 2
12	0x1000		
13	0x2000		
14	0x4000		Fore each source, Bit14 is set if the zone is in music state
15	0x8000		Fore each source, Bit15 is set if the zone is in evacuation state

ZONES FAULT STATE 1~128, 0x0A96~0x0B15

Bit	Mask	Name	Description
0	0x0001	ZASC	Short Circuit (A side)
1	0x0002	ZBSC	Short Circuit (B side)
2	0x0004	ZAOC	Open Circuit (A side)
3	0x0008	ZBOC	Open Circuit (B side)
4	0x0010	ZAIM	Impedance (A side)
5	0x0020	ZBIM	Impedance (B side)
15	0X8000	ZMO	Monitoring is off

SCHEDULER

Address	Bit	Mask	Description
0x0B16	0~15	X	Number of existing scheduler events (max 128)
0x0B17	0~15	X	Scheduler #1 Seconds 0 to 59
0x0B18	0~15	X	Scheduler #1 Minutes 0 to 59
0x0B19	0~15	X	Scheduler #1 Hours 0 to 23
0x0B1A	0~15	X	Scheduler #1 Day 0 to 31
0x0B1B	0~15	X	Scheduler #1 Month 0 to 11

0x0B1C	0~15	X	Scheduler #1 Year 2008 to 2999
0x0B1D	0~15	X	DIVA event number #1
0x0B1E~0x0B25	0~15	X	Scheduler #1 Name
…	…..	…..	…..
0x128F~0x1296			Scheduler #128 Name

AMPLIFIERS FAULTS 0x1297

Bit	Mask	Name	Description
0	0x0001	MAF	Music amplifier fault
1	0x0002	VAF	Voice amplifier fault
2	0x0004	MAB	Music amplifier used as backup

SOURCES AUDIO LEVELS 0x1298~0x129C

Address	Bit	Mask	Description
0x1298	0~15	X	Firemen microphone level
0x1299	0~15	X	PSS level
0x129A	0~15	X	Mic/Line level
0x129B	0~15	X	Music 1 level
0x129C	0~15	X	Music 2 level

Top position is full level (value=31), mid position is -20db below full level (value=15), and bottom position is cut level (-80dB or less, value=0).

WATCHDOG OUTPUT

Address	Bit	Mask	Description
0x129D	0~15	X	Watchdog output counter

EVENT TYPE AND NAME

Address	Bit	Mask	Description
0x129E	0~15	X	**Event #1 type:** Load preset = 1 Logic output = 2 command string = 3 Stop event = 4 Stop event on zone = 5 Play message = 6 Paging(Fireman and Mic/Line) = 7 Play music = 8 music on = 9 music off = 10 music on by zones = 11 music off by zones = 12 Toggle music on/off = 13 Toggle music on/off by zones = 14 Security mode = 16 Stop all event = 17
0x129F~0x12A6	0~15	X	Event #1 name (16 characters)
…..	…..	…..	…..
0x1715	0~15	X	Event #128 type
0x1716~0x171D	0~15	X	Event #128 name (16 characters)

COMMANDS

COMMANDS TABLE

ADDRESS	REGISTER
0x171E	WATCHDOG INPUT
0x171F	COMMAND/ACKNOWLEDGE
0x1720~0x1727	ZONE SELECT 1~8
0x1728	ALL SELECT
0x1729	ZONE MONITOR
0x172A	ZONE SOURCE SELECT
0x172B	LEVEL SET
0x172C	EVENT NUMBER
0x172D	LOG TIME L
0x172E	LOG TIME H
0x172F	LOG FILE L
0x1730	LOG FILE H
0x1731	DATE TIME SECONDS **SET**
0x1732	DATE TIME MINUTES **SET**
0x1733	DATE TIME HOURS **SET**
0x1734	DATE TIME DAY **SET**
0x1735	DATE TIME MONTH **SET**
0x1736	DATE TIME YEAR **SET**
0x1737	SCHEDULER TIME SECONDS **SET**
0x1738	SCHEDULER TIME MINUTES **SET**
0x1739	SCHEDULER TIME HOURS **SET**
0x173A	SCHEDULER TIME DAY **SET**
0x173B	SCHEDULER TIME MONTH **SET**
0x173C	SCHEDULER TIME YEAR **SET**
0x173D	SCHEDULER DIVA EVENT **SET**
0x173E~0x1745	SCHEDULER NAME **SET**

WATCHDOG INPUT 0x171E

Bit	Mask	Description
0~15	X	Watchdog input counter

COMMAND/ACKNOWLEDGE 0x171F

Bit	Mask	Description
0~15	X	Command executed
-1	UNK	Command unknown
-2	NAK	Command not executed because of a wrong parameter
Any > 0	N/A	Command pending

PARAMETERS

ZONES SELECT

Address	Parameters	Bit / Mask	Description
0x1720	PZS1	0~15 / 0x0001~0x8000	Bit field zones 1 to 16
0x1721	PZS2	0~15 / 0x0001~0x8000	Bit field zones 17 to 32
…..	…..	…..	…..
0x1727	PZS8	0~15 / 0x0001~0x8000	Bit field zones 113 to 128
0x1728	PZO	0~15 / 0x0001~0x8000	Zone 1 to 128

ZONE MONITOR

Address	Parameters	Bit / Mask	Description
0x1729	PZM	15 / 0x8000	0x8000 to disable monitoring, 0x0000 to enable monitoring

ZONE SOURCE SELECT 0x172A

Bit	Parameters	Mask	Description
0~7	X		
8	0x0100	ZSFM	Fireman microphone
9	0x0200	ZSML	Mic/Line
10	0x0400	ZSMC 1	Music 1
11	0x0800	ZSMC 2	Music 2
12	0x1000		
13	0x2000		
14	0x4000		
15	0x8000		

LEVEL SET 0x172B

Bit	Description
0~15	Level (not a dB scale)

EVENT NUMBER 0x172C

Bit	Description
0~15	Event number, based on Index

LOG TIME AND LOG FILE 0x172D~0x1730

Address	Register	Bit	Description
0x172D	LOG TIME L	0~15	Bit 0~5 = year Bit 6~9 = month Bit 10~14 = day Bit 15~19 = hour Bit 20~25 = minutes Bit 26~31 = second Minutes 0 to 59
0x172E	LOG TIME H	16~31	

0x172F	LOG FILE L	0~15	Bit 0 = start/end (1:Start, 0:end) Bit 1~7 = category Bit 8~19 = type Bit 20~31 = item
0x1730	LOG FILE H	16~31	

DATE AND TIME

Address	Register	Bit	Description
0x1731	DATE TIME SECONDS SET	0~15	Seconds 0 to 59
0x1732	DATE TIME MINUTES SET	0~15	Minutes 0 to 59
0x1733	DATE TIME HOURS SET	0~15	Hours 0 to 23
0x1734	DATE TIME DAY SET	0~15	Day 0 to 31
0x1735	DATE TIME MONTH SET	0~15	Month 0 to 11
0x1736	DATE TIME YEAR SET	0~15	Year 2008 to 2999

SCHEDULER

Address	Register	Bit	Description
0x1737	SCHEDULER SECONDS SET	0~15	Seconds 0 to 59
0x1738	SCHEDULER MINUTES SET	0~15	Minutes 0 to 59
0x1739	SCHEDULER HOURS SET	0~15	Hours 0 to 23
0x173A	SCHEDULER DAY SET	0~15	Day 0 to 31
0x173B	SCHEDULER MONTH SET	0~15	Month 0 to 11
0x173C	SCHEDULER YEAR SET	0~15	Year 2008 to 2999
0x173D	SCHEDULER DIVA EVENT SET	0~15	DIVA event number
0x173E~0x1745	SCEDULER NAME SET	0~15	Name (16 characters)

COMMANDS 0x171F

Value	Input Parameters	Description	Output Parameters
1		Get date and time	PDT
2	PDT	Set date and time	
3	PLD	Get first event of the log-file	
4	PLD	Get next event of the log-file (NAK if none)	
6	PSO,PAL	Set source level	
7	PZO, PZM	Set zone monitoring on/off	
8	PEN,PZS	Start event (if no zones in PZS, then start event on pre-defined zones)	

9	PEN,PZS	Stop event (if no zones in PZS, then stop event on pre-defined zones)	
10	SCH	Create scheduler event	
11	SCH	Delete scheduler event	

EXAMPLES

STARTING EVENT IN PREDEFINE ZONES

Write the event number at the address 0x172C and send the command.

Write 0x0001 at address 0x172C (Event 1 selected)
Write 0x0008 at address 0x171F (Trigger Event 1)

To stop the Event:

- Write 0x0001 at address 0x172C (Event 1 selected)
Write 0x0009 at address 0x171F (Stop Event 1)

STARTING EVENT IN SELECTED ZONES

The zones are coded on 16 Bit and follow the arrangement showed below:

Zone(s)	Hex value	Dec.Value
1	0x0001	1
2	0x0002	2
3	0x0004	4
4	0x0008	8
5	0x0010	16
6	0x0020	32
7	0x0040	64
8	0x0080	128
9	0x0100	256
10	0x0200	512
11	0x0400	1024
12	0x0800	2048
13	0x1000	4096
14	0x2000	8192
15	0x4000	16384
16	0x8000	32768
1+6+12	0x0821	10000

To start the event:

Write 0x0081 at address 0x1720 (zone 1 and 8 selected)
Write 0x0010 at address 0x172C (Event 16 selected)
Write 0x0008 at address 0x171F (Trigger Event 2)

To stop the Event:

Write 0x0081 at address 0x1720 (zone 1 and 8 selected)
Write 0x0010 at address 0x172C (Event 16 selected)
Write 0x0009 at address 0x171F (Stop Event 16)

11. Explanation About Monitoring Process

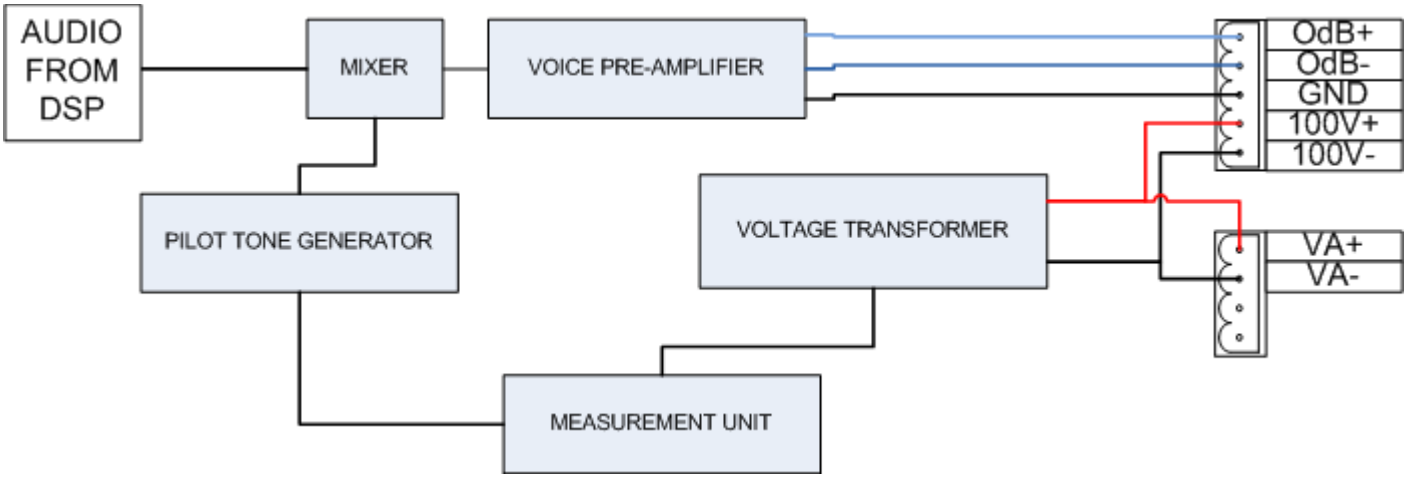
The monitoring can be split into 2 different parts: Line monitoring (zones) and amplifier monitoring. Line monitoring is based on impedance measurement and amplifier monitoring on amplifier's gain measurement.

Amplifier monitoring:

The amplifier monitoring used a pilot tone at 18kHz or 20kHz that is adapted to pull out 2 Vrms. By measuring the output signal of the amplifier and computing it in the DSP, we can adjust the level of the pilot tone. The adjustment of the pilot tone is related to the amplifier gain and can directly inform us on the gain value.

The gain variation are measured constantly and compared to a gain references value.

Below, you can find a bloc schematics for Voice amplifier channel.



NOTE: If the amplifier gain is changed after the reference has been taken, the pilot tone level could increase dramatically. Example: the reference is taken with a gain of 1, the pilot tone will be set to 2Vrms. Then if the amplifier gain is increased to 100, the pilot tone level will be raised to 200Vrms!!!!

To avoid problems, the gain of both Music and Voice amplifier should be set to same value and in preference to the maximum gain value.

There is three different channel for monitoring: Voice amplifier channel, Music amplifier channel and VO3 channel. VO3 is channel that only generate the pilot tone in case no amplifier channel is in used.

Zone Monitoring:

Zone Monitoring is based on three different reference values: Line A, Line B and Line A/B. Reference for Line A and Line B are Line A and Line B direct impedance measure. Reference Line A/B correspond to the Line A and B in parallel.

Line A = Za
Line B = Zb
Line A/B = 1/((1/Za) + (1/Zb))

To ensure a high precision measure, for each reference (A, B and B/A) three values are taken. Example: Line A: VO3 channel, Line A: Voice amp channel and Line A: Music amp channel. In the references display, the value will change according to channel routed on each zone.

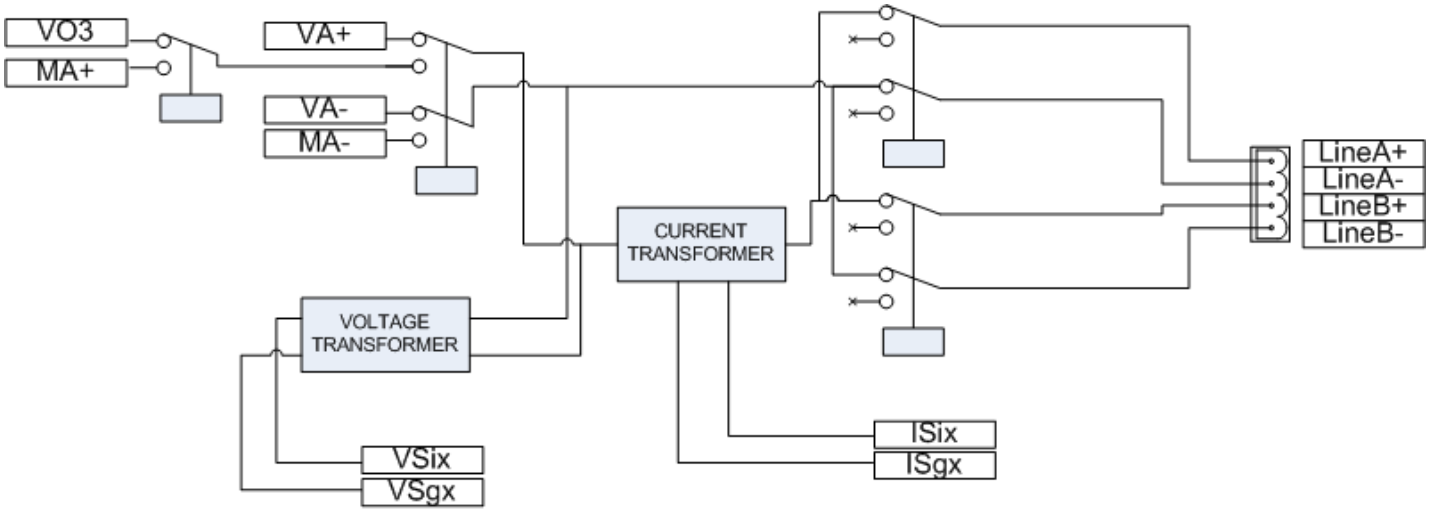
Example: Zone 1 Line A ref:

- VO3: 530 Ohm
- Voice: 545 Ohm
- Music: 540 Ohm

When music is routed to zone 1, the display shows 540 Ohm. As soon as a Voice call is routed on the zone 1, the display will show 545 Ohm. If no music or no voice call is routed on zone 1, the display will show 530 Ohm.

The schematics above explain how the different channel are routed to zone(S) and how the impedance measurement is made. Signal VSix, VSgx, ISix and ISgx are computed into DSP and then compared to reference values.

The real measure is made with A and B in parallel. In the case the measured value differs from the reference value, Line A will be measured independently and compare to the Line A reference and the same process is done for Line B.



12. Cancel All and Coexist mode

The priority parameter of an event allows it to be started or not if there is already one event active. A higher priority event will overwrite zones of a lower priority event in any case. The lowest priority event will be temporally disabled while the highest priority event is active. If the trigger of the lowest priority event is still active after the highest priority event has stopped, the lowest priority event must start again in any case.

It exists two different modes to manage zone conflict: Coexist and Cancel All mode.

Note: Events in the chronograms represent also the corresponding trigger.

Coexist mode: allows the lowest priority event to keep going in the non-common zones while the highest priority event is active.

The chronogram on figure 1 describes the process for coexist mode situation:
Event 1 lowest priority, zone 1, 2, 3 and 4, conflict mode: coexist. Event 2 highest priority, zone 3 and 4, conflict mode: whatever.

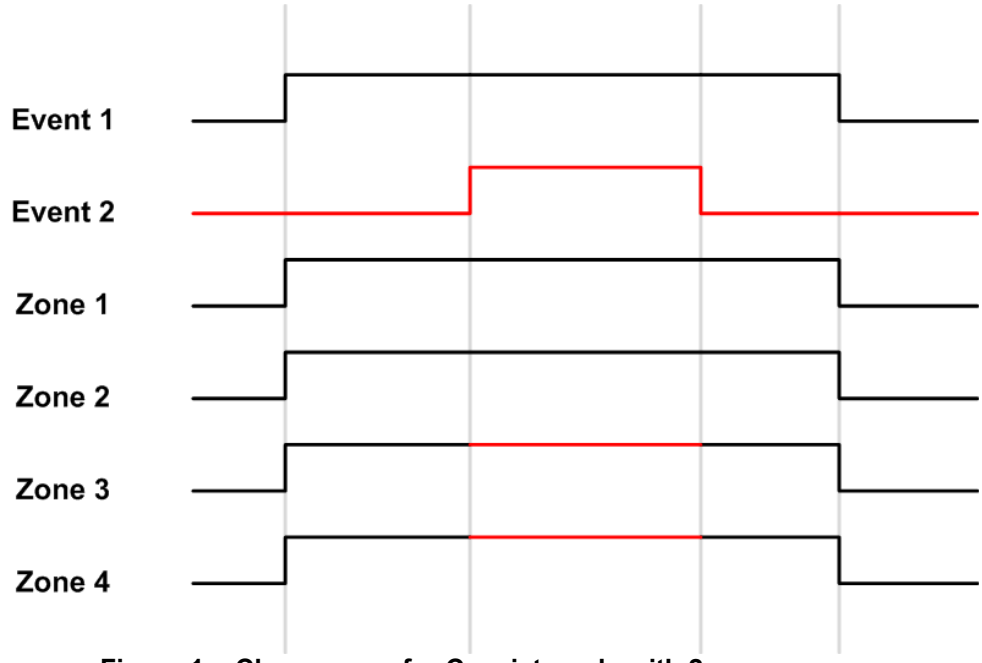


Figure 1 : Chronogram for Coexist mode with 2 common zone

Cancel All mode: when the highest priority event overwrites at least one zone of the lowest priority event, the lowest priority event will be totally deactivated while the highest priority event is active.

The chronogram on figure 3 describes the process for cancel All mode situation:
Event 1 lowest priority, zone 1, 2, 3 and 4, conflict mode: Cancel All. Event 2 highest priority, zone 3 and 4, conflict mode: whatever.

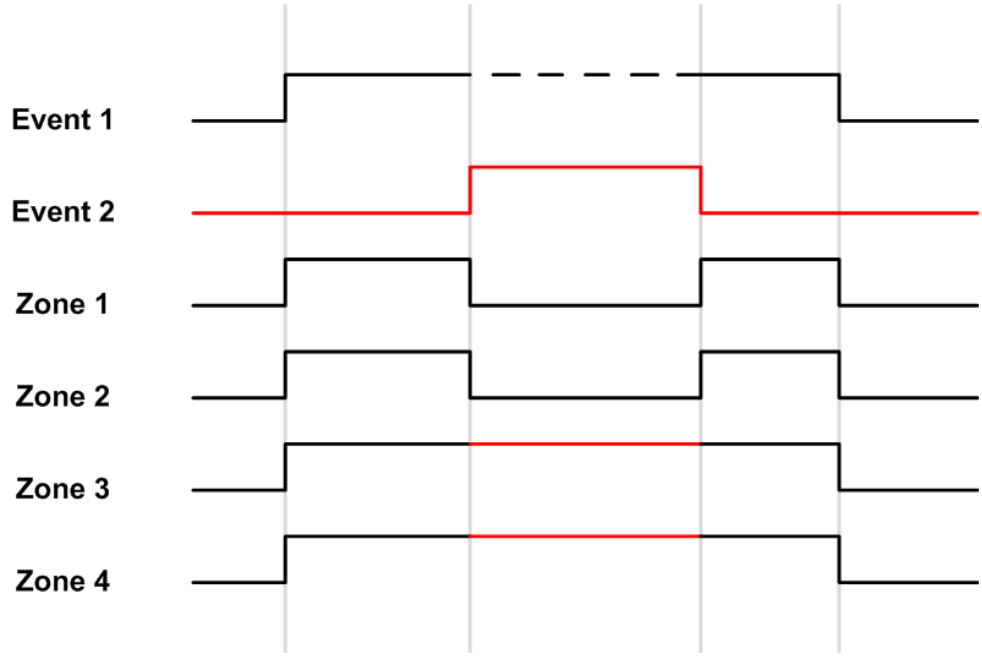


Figure 2 : Chronogram for Cancel All mode for 2 common zone

Special case:

3 events:

Figure 3: In coexist mode.

Event 1: priority 20, zone 1 and 2, coexist mode, triggered by logic in.
Event 2: priority 10, zone 2, 3 and 4, coexist mode, triggered by logic in
Event 3, priority 1, zone 3 and 4, conflict mode: whatever, Fireman microphone

Figure 4: in Cancel All mode.

Event 1: priority 20, zone 1 and 2, Cancel All mode, triggered by logic in
Event 2: priority 10, zone 2, 3 and 4, Cancel All mode, triggered by logic in
Event 3, priority 1, zone 3 and 4, conflict mode: whatever, Fireman microphone

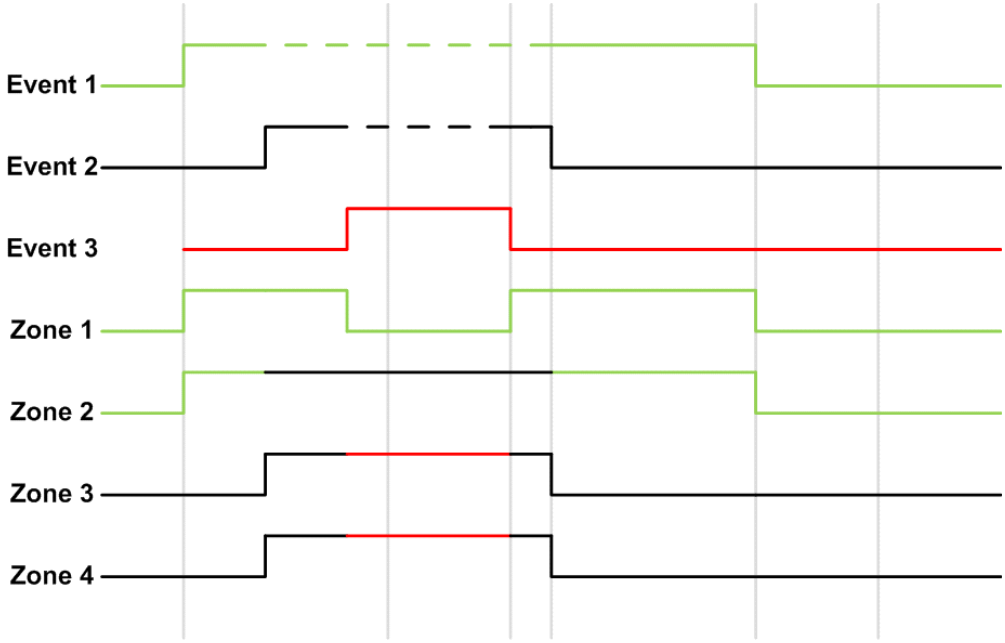


Figure 3: Chronogram with 3 events in coexist mode

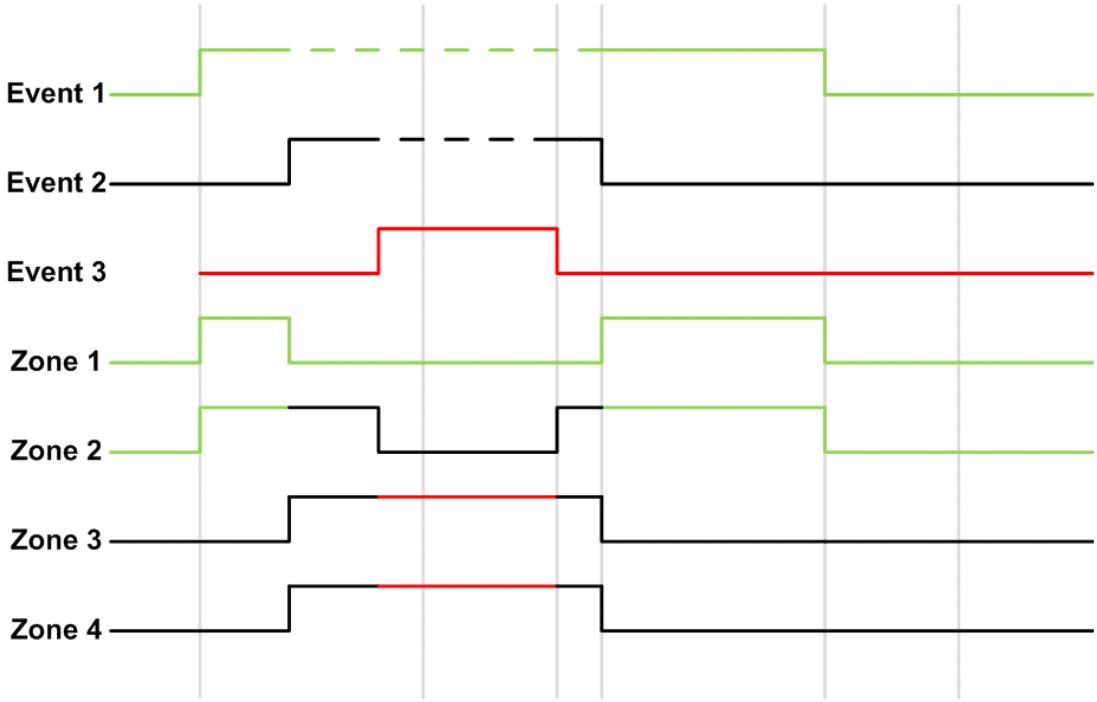


Figure 4: Chronogram with 3 events in Cancel All mode

13. Log File Messages List

Slave Disconnect	
S01 DISCONNECT	Slave 01 Disconnect
...	
S15 DISCONNECT	Slave 15 Disconnect
Voice Amp Fail	
M01 V AMP FAIL	Master Voice Amp Fail
S01 V AMP FAIL	Slave 01 Voice Amp Fail
...	
S15 V AMP FAIL	Slave 15 Voice Amp Fail
Voice Amp Gain To Low	
M01 V GAIN LOW	Master Voice Amp Gain To Low
S01 V GAIN LOW	Slave 01 Voice Amp Gain To Low
...	
S15 V GAIN LOW	Slave 15 Voice Amp Gain To Low
Voice Amp Gain To Hight	
M01 V GAIN HIGH	Master Voice Amp Gain To Hight
S01 V GAIN HIGH	Slave 01 Voice Amp Gain To Hight
...	
S15 V GAIN HIGH	Slave 15 Voice Amp Gain To Hight
Music Amp Fail	
M01 M AMP FAIL	Master Music Amp Fail
S01 M AMP FAIL	Slave 01 Music Amp Fail
...	
S15 M AMP FAIL	Slave 15 Music Amp Fail
Amp Gain To Low	
M01 M GAIN LOW	Master Music Amp Gain To Low
S01 M GAIN LOW	Slave 01 Music Amp Gain To Low
...	
S15 M GAIN LOW	Slave 15 Music Amp Gain To Low
Amp Gain To Hight	
M01 M GAIN HIGH	Master Music Amp Gain To Hight
S01 M GAIN HIGH	Slave 01 Music Amp Gain To Hight
...	
S15 M GAIN HIGH	Slave 15 Music Amp Gain To Hight
Vo3 Fail	
M01 VO3 FAIL	Master Vo3 Fail
S01 VO3 FAIL	Slave 01 Vo3 Fail
...	
S15 VO3 FAIL	Slave 15 Vo3 Fail

Zone Line A Impedance	
Master Zone Line A Impedance	
M01 Z-1 A IMPEDE	Master Zone 1 Line A Impedance
...	
M01 Z-8 A IMPEDE	Master Zone 8 Line A Impedance
Slave 01 Zone Line A Impedance	
S01 Z-1 A IMPEDE	Slave 01 Zone 1 Line A Impedance
...	
S01 Z-8 A IMPEDE	Slave 01 Zone 8 Line A Impedance
Slave 15 Zone Line A Impedance	
S15 Z-1 A IMPEDE	Slave 15 Zone 1 Line A Impedance
...	
S15 Z-8 A IMPEDE	Slave 15 Zone 8 Line A Impedance
Zone Line A Open	
Master Zone Line A Open	
M01 Z-1 A OPEN	Master Zone 1 Line A Open
...	
M01 Z-8 A OPEN	Master Zone 8 Line A Open
Slave 01 Zone Line A Open	
S01 Z-1 A OPEN	Slave 01 Zone 1 Line A Open
...	
S01 Z-8 A OPEN	Slave 01 Zone 8 Line A Open
Slave 15 Zone Line A Open	
S15 Z-1 A OPEN	Slave 15 Zone 1 Line A Open
...	
S15 Z-8 A OPEN	Slave 15 Zone 8 Line A Open
Zone Line A Short	
Master Zone Line A Short	
M01 Z-1 A SHORT	Master Zone 1 Line A Short
...	
M01 Z-8 A SHORT	Master Zone 8 Line A Short
Slave 01 Zone Line A Short	
S01 Z-1 A SHORT	Slave 01 Zone 1 Line A Short
...	
S01 Z-8 A SHORT	Slave 01 Zone 8 Line A Short
Slave 15 Zone Line A Short	
S15 Z-1 A SHORT	Slave 15 Zone 1 Line A Short
...	
S15 Z-8 A SHORT	Slave 15 Zone 8 Line A Short
Zone Line B Impedance	
Master Zone Line B Impedance	
M01 Z-1 B IMPEDE	Master Zone 1 Line B Impedance
...	
M01 Z-8 B IMPEDE	Master Zone 8 Line B Impedance
Slave 01 Zone Line B Impedance	
S01 Z-1 B IMPEDE	Slave 01 Zone 1 Line B Impedance
...	
S01 Z-8 B IMPEDE	Slave 01 Zone 8 Line B Impedance
Slave 15 Zone Line B Impedance	
S15 Z-1 B IMPEDE	Slave 15 Zone 1 Line B Impedance
...	
S15 Z-8 B IMPEDE	Slave 15 Zone 8 Line B Impedance
Zone Line B Open	
Master Zone Line B Open	
M01 Z-1 B OPEN	Master Zone 1 Line B Open
...	
M01 Z-8 B OPEN	Master Zone 8 Line B Open
Slave 01 Zone Line B Open	
S01 Z-1 B OPEN	Slave 01 Zone 1 Line B Open
...	
S01 Z-8 B OPEN	Slave 01 Zone 8 Line B Open
Slave 15 Zone Line B Open	
S15 Z-1 B OPEN	Slave 15 Zone 1 Line B Open
...	
S15 Z-8 B OPEN	Slave 15 Zone 8 Line B Open

Zone Line B Short	
Master Zone Line B Short	
M01 Z-1 B SHORT	Master Zone 1 Line B Short
...	
M01 Z-8 B SHORT	Master Zone 8 Line B Short
Slave 01 Zone Line B Short	
S01 Z-1 B SHORT	Slave 01 Zone 1 Line B Short
...	
S01 Z-8 B SHORT	Slave 01 Zone 8 Line B Short
Slave 15 Zone Line B Short	
S15 Z-1 B SHORT	Slave 15 Zone 1 Line B Short
...	
S15 Z-8 B SHORT	Slave 15 Zone 8 Line B Short
Fireman Microphone Fault	
FIREMAN FAIL	Fireman Fail
FIREMAN OPEN	Fireman Open
FIREMAN SHORT	Fireman Short
Evacuation Key Fault	
EVAC KEY OPEN	Evacuation Key Open
EVAC KEY SHORT	Evacuation Key Short
Alarm Key Fault	
ALARM KEY OPEN	Alarm Key Open
ALARM KEY SHORT	Alarm Key Short
Test Key Fault	
TEST KEY OPEN	Test Key Open
TEST KEY SHORT	Test Key Short
All Call Key Fault	
ALL CALL OPEN	All Call Key Open
ALL CALL SHORT	All Call Key Short
PSS Fault	
RS485 PSS Fault	
PSS DISCONNECT	RS485 PSS Disconnect
PSS SPK FAULT	RS485 PSS Speaker Fault
PSS MIC FAULT	RS485 PSS Microphone Fault
PSS TFT FAULT	RS485 PSS TFT Panel Fault
Ethernet PSS 1 Fault	
EPSS1 DISCONNECT	Ethernet PSS 1 Disconnect
EPSS1 SPK FAULT	Ethernet PSS 1 Speaker Fault
EPSS1 MIC FAULT	Ethernet PSS 1 Microphone Fault
EPSS1 TFT FAULT	Ethernet PSS 1 TFT Panel Fault
...	
Ethernet PSS 8 Fault	
EPSS8 DISCONNECT	Ethernet PSS 8 Disconnect
EPSS8 SPK FAULT	Ethernet PSS 8 Speaker Fault
EPSS8 MIC FAULT	Ethernet PSS 8 Microphone Fault
EPSS8 TFT FAULT	Ethernet PSS 8 TFT Panel Fault
PSM Fault	
PSM DISCONNECT	PSM Disconnect
PSM SPK FAULT	PSM Speaker Fault
PSM MIC FAULT	PSM Microphone Fault
Cofiguration Table Error	
NO CONFIGURATION	No Configuration Table In Machine
CFG CRC ERROR	Configuration CRC Error
CFG VERSION ERR	Configuration Version Error
Evacuation Input Open	
Master Evacuation Input Open	
M01 EI-1 OPEN	M01 Evacuation Input 1 Open
...	
M01 EI-9 OPEN	M01 Evacuation Input 9 Open
Slave 01 Evacuation Input Open	
S01 EI-1 OPEN	Slave 01 Evacuation Input 1 Open
...	
S01 EI-9 OPEN	Slave 01 Evacuation Input 9 Open
Slave 15 Evacuation Input Open	
S15 EI-1 OPEN	Slave 15 Evacuation Input 1 Open
...	
S15 EI-9 OPEN	Slave 15 Evacuation Input 9 Open

Evacuation Input Short	
Master Evacuation Input Short	
M01 EI-1 SHORT	Master Evacuation Input 1 Short
...	
M01 EI-9 SHORT	Master Evacuation Input 9 Short
Slave 01 Evacuation Input Short	
S01 EI-1 SHORT	Slave 01 Evacuation Input 1 Short
...	
S01 EI-9 SHORT	Slave 01 Evacuation Input 9 Short
Slave 15 Evacuation Input Short	
S15 EI-1 SHORT	Slave 15 Evacuation Input 1 Short
...	
S15 EI-9 SHORT	Slave 15 Evacuation Input 9 Short
Exterior Fault Input Action	
Master Exterior Fault Input	
M01 EFI-1 ACTION	Master Exterior Fault Input 1 Action
M01 EFI-2 ACTION	Master Exterior Fault Input 2 Action
Slave 01 Exterior Fault Input	
S01 EFI-1 ACTION	Slave 01 Exterior Fault Input 1 Action
S01 EFI-2 ACTION	Slave 01 Exterior Fault Input 2 Action
Slave 15 Exterior Fault Input	
S15 EFI-1 ACTION	Slave 15 Exterior Fault Input 1 Action
S15 EFI-2 ACTION	Slave 15 Exterior Fault Input 2 Action
Important Flash Block Fault	
MSG FLASH FAULT	Storage Message Flash Block Fault
CFG FLASH FAULT	Storage Cofiguration Table Flash Block Fault
PGM FLASH FAULT	Storage Program Flash Block Fault

14. LCD Faults List and Maintenance Guide

Main parts of the DIVA8 system are constantly monitored so the fault list and maintenance operations guide should cover most of the situation. However, some general troubleshooting advices could be found prior the fault list chapter.

14.1. DIVA8 Power LED is OFF

- Make sure the wire path between BECS and DIVA8 is in good condition.
- Make sure the BECS is correctly connected to the DIVA8 unit.
- If still no power LED lit, please contact your ATEIS dealer.

14.2. DIVA8 Power LED is ON but DIVA8 doesn't boot

- Disconnect and reconnect the power supply connecter.
- If the DIVA8 still cannot boot, please contact your ATEIS dealer.

14.3. DIVA8 display is blocked

- Disconnect and reconnect the power supply connector.
- If nothing helps, pleas contact your ATEIS dealer.

14.4. The TCP/IP connection between computer and DIVA8 can't be made

- Verify your computer network card settings.
- Verify DIVA8 Ethernet settings.
- Try to use the MANUAL CONNECT option in the Search Device window.
- Verify that the switches on the Network allow you to use the DIVA communication port.
- Verify Windows firewall settings.
- If nothing helps, please contact your ATEIS dealer

14.5. No Audio is coming out of speaker lines

- Verify that amplifiers are correctly connected to the DIVA8.
- Verify that speaker line connectors are correctly engaged.
- Verify that amplifiers are turn ON and are in good condition.
- Verify that audio is coming out of the DIVA8 0dB output.
- If nothing helps, please contact your Ateis dealer.

14.6. Fault List and maintenance operation guide

LCD DISPLAY	NOTE	DESCRIPTION AND MAINTENANCE ACTION
Internal IC failure		
M01 FPGA IC FAIL		Master FPGA failure. **Action**: please contact your Ateis dealer
SXX CPLD IC FAIL	XX = 1-15	Slave CPLD failure. **Action**: please contact your Ateis dealer
M01 POWER IC FL		Master power chip failure **Action**: please contact your Ateis dealer
SXX POWER IC FL	XX = 1-15	Slave power chip failure. **Action**: please contact your Ateis dealer

FUNC KEY IC FAIL		Front panel keys management chip doesn't answer. **Action**: please contact your Ateis dealer
EVAC KEY IC FAIL		Front panel keys management chip doesn't answer. **Action**: please contact your Ateis dealer
ALARM KEY IC FL		Front panel keys management chip doesn't answer. **Action**: please contact your Ateis dealer
TEST KEY IC FAIL		Front panel keys management chip doesn't answer. **Action**: please contact your Ateis dealer
A-C KEY IC FAIL		Front panel keys management chip doesn't answer. **Action**: please contact your Ateis dealer
FMM KEY IC FAIL		Fireman management chip doesn't answer **Action**: please contact your Ateis dealer
AUDIO LINE IC FL		Audio line management chip doesn't answer **Action**: please contact your Ateis dealer
M01 LEAK IC FAIL		Master leakage management chip doesn't answer **Action**: please contact your Ateis dealer
SXX LEAK IC FAIL	XX = 1-15	Slave XX leakage management chip doesn't answer **Action**: please contact your Ateis dealer
FUNC LED IC FAIL		Function LEDs management chip doesn't answer **Action**: please contact your Ateis dealer
M01 Z-LED IC FL		Master zone LEDs management chip doesn't answer **Action**: please contact your Ateis dealer
SXX Z-LED IC FL	XX = 1-15	Slave zone LEDs management chip doesn't answer **Action**: please contact your Ateis dealer
Slave connection lost		
SXX DISCONNECT	XX = 1-15	Connection to slave XX has been lost. **Action:** Check the slave XX status (power, fault, LEDs) and condition Check corresponding link cable condition If necessary exchange the unit
Voice amplifier failure		
M01 V AMP FAIL		The master voice amplifier gain drops down to 0. **Action:** Check the master voice amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
SXX V AMP FAIL	XX = 1-15	The slave XX voice amplifier gain drops down to 0. **Action:** Check the slave voice amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
M01 V GAIN LOW		The master voice amplifier gain drops out of tolerance. **Action:** Check the master voice amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition

		If necessary exchange the unit
SXX V GAIN LOW	XX = 1-15	The slave XX voice amplifier gain drops out of tolerance. **Action:** Check the slave XX voice amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
M01 V GAIN HIGH		The master voice amplifier gain is higher than tolerance. **Action:** Check the master voice amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
SXX V GAIN HIGH	XX = 1-15	The slave XX voice amplifier is higher than tolerance. **Action:** Check the slave XX voice amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
Music amplifier failure		
M01 M AMP FAIL		The master music amplifier gain drops down to 0. **Action:** Check the master music amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
SXX M AMP FAIL	XX = 1-15	The slave XX music amplifier gain drops down to 0. **Action:** Check the slave music amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
M01 M GAIN LOW		The master music amplifier gain drops out of tolerance. **Action:** Check the master music amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
SXX M GAIN LOW	XX = 1-15	The slave XX music amplifier gain drops out of tolerance. **Action:** Check the slave XX music amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
M01 M GAIN HIGH		The master music amplifier gain is higher than tolerance. **Action:** Check the master music amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit
SXX M GAIN HIGH	XX = 1-15	The slave XX music amplifier is higher than tolerance. **Action:** Check the slave XX music amplifier status (power, fault, LEDs) and condition Check amplifier wiring condition If necessary exchange the unit

VO3 Signal failure

M01 VO3 FAIL		The master VO3 amplifier chip (pilot tone amplifier) is out of order. **Action:** Please take contact with your Ateis dealer
SXX VO3 FAIL	XX = 1-15	The slave XX VO3 amplifier chip (pilot tone amplifier) is out of order. **Action:** Please take contact with your Ateis dealer

Leakage fault

M01 LEAK FAIL		Leakage impedance between master amplifiers +/- pins and ground drops under threshold. **Action:** Check the master voice and music amplifiers status (power, fault, LEDs) and condition Check amplifiers wiring condition If necessary exchange the unit
SXX LEAK FAIL	XX = 1-15	Leakage impedance between slave XX amplifiers +/- pins and ground drops under threshold. **Action:** Check the master voice and music amplifiers status (power, fault, LEDs) and condition Check amplifiers wiring condition If necessary exchange the unit

Speaker line A faults

M01 Z-X A IMP	X = 1-8	Master zone X line A impedance is out of tolerance. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
SXX Z-Y A IMP	XX = 1-15, Y = 1-8	Slave XX zone Y line A impedance is out of tolerance. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
M01 Z-X A OPEN	X = 1-8	Master zone X line A impedance is higher than 5kOms. The corresponding speaker line is seen as OPEN. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
SXX Z-Y A OPEN	XX = 1-15, Y = 1-8	Slave XX zone Y line A impedance is higher than 5kOms. The corresponding speaker line is seen as OPEN. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line

		Reset monitoring
M01 Z-X A SHORT	X = 1-8	Master zone X line A impedance is under 4 Ohms. The corresponding speaker line is seen as shorten. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
SXX Z-Y A SHORT	XX = 1-15, Y = 1-8	Slave XX zone Y line A impedance is under 4 Ohms. The corresponding speaker line is seen as shorten. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
Speaker line B faults		
M01 Z-X B IMP	X = 1-8	Master zone X line B impedance is out of tolerance. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
SXX Z-Y B IMP	XX = 1-15, Y = 1-8	Slave XX zone Y line B impedance is out of tolerance. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
M01 Z-X B OPEN	X = 1-8	Master zone X line B impedance is higher than 5kOms. The corresponding speaker line is seen as OPEN. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
SXX Z-Y B OPEN	XX = 1-15, Y = 1-8	Slave XX zone Y line B impedance is higher than 5kOms. The corresponding speaker line is seen as OPEN. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
M01 Z-X B SHORT	X = 1-8	Master zone X line B impedance is under 4 Ohms. The corresponding speaker line is seen as shorten. **Action:** Check the corresponding impedance real time measurement in the software monitoring window.

		Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
SXX Z-Y B SHORT	XX = 1-15, Y = 1-8	Slave XX zone Y line B impedance is under 4 Ohms. The corresponding speaker line is seen as shorten. **Action:** Check the corresponding impedance real time measurement in the software monitoring window. Check the line speakers condition Change the line wiring or speaker Take new references for the line Reset monitoring
Fireman microphone faults		
FMM AUDIO FAIL		Fireman microphone audio line is defective, no audio is received on DIVA. **Action:** Check the fireman microphone condition If necessary exchange the fireman microphone
FMM KEY OPEN		Fireman microphone contact line is defective, the contact line is seen as an open line (no contact). **Action:** Check the fireman microphone condition If necessary exchange the fireman microphone
FMM KEY SHORT		Fireman microphone contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Check the fireman microphone condition If necessary exchange the fireman microphone
EVAC button faults		
EVAC KEY OPEN		Front panel EVAC key contact line is defective, the contact line is seen as an open line (no contact). **Action:** Please contact your Ateis dealer
EVAC KEY SHORT		Front panel EVAC key contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Please contact your Ateis dealer
ALERT button faults		
ALERT KEY OPEN		Front panel ALERT key contact line is defective, the contact line is seen as an open line (no contact). **Action:** Please contact your Ateis dealer
ALERT KEY SHORT		Front panel ALERT key contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Please contact your Ateis dealer
MSG/TEST button faults		
TEST KEY OPEN		Front panel MSG/TEST key contact line is defective, the contact line is seen as an open line (no contact). **Action:** Please contact your Ateis dealer
TEST KEY SHORT		Front panel MSG/TEST key contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Please contact your Ateis dealer
ALLCALL button faults		

ALL CALL OPEN		Front panel ALL CALL key contact line is defective, the contact line is seen as an open line (no contact). **Action:** Please contact your Ateis dealer
ALL CALL SHORT		Front panel ALL CALL key contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Please contact your Ateis dealer
PSSG2 faults		
PSS DISCONNECT		Communication between DIVA master and PSSG" microphone console has been lost. **Action:** Check PSSG2 condition Check the PSSG2-DIVA wiring path Check PSSG2 power supply If necessary, exchange the PSSG2 unit
PSS SPK FAIL		Embedded PSSG2 monitoring speaker is defective. **Action:** Check PSSG2 condition Check the PSSG2-DIVA wiring path If necessary, exchange the PSSG2 unit
PSS MIC FAIL		PSSG2 microphone is defective. **Action:** Check PSSG2 condition Check the PSSG2-DIVA wiring path If necessary, exchange the PSSG2 unit
PSS TFT FAIL		PSSG2 color screen is defective. **Action:** Check PSSG2 condition Check the PSSG2-DIVA wiring path If necessary, exchange the PSSG2 unit
PSS AUDIO FAIL		PSSG2 audio line is defective. **Action:** Check PSSG2 condition Check the PSSG2-DIVA wiring path If necessary, exchange the PSSG2 unit
PSSG2-E faults		
EPSSX DISCONNECT	X = 1-8	Communication between DIVA master and PSSG2-EX microphone console has been lost. **Action:** Check PSSG2-E condition Check the PSSG2E-DIVA wiring path Check PSSG2-E power supply If necessary, exchange the PSSG2-E unit
EPSSX SPK FAIL	X = 1-8	Embedded PSSG2-EX monitoring speaker is defective. **Action:** Check PSSG2-E condition Check the PSSG2E-DIVA wiring path If necessary, exchange the PSSG2-E unit
EPSSX MIC FAIL	X = 1-8	PSSG2-EX microphone is defective. **Action:** Check PSSG2-E condition Check the PSSG2E-DIVA wiring path If necessary, exchange the PSSG2-E unit
EPSSX TFT FAIL	X = 1-8	PSSG2-EX color screen is defective. **Action:** Check PSSG2-E condition Check the PSSG2E-DIVA wiring path If necessary, exchange the PSSG2-E unit

PSM/CD16 faults

PSM DISCONNECT		Communication between DIVA master and master PSM microphone console has been lost. **Action:** Check PSM cluster condition Check the PSMs-DIVA wiring path Check PSM power supply If necessary, exchange the PSM unit
PSM SPK FAIL		Embedded master PSM monitoring speaker is defective. **Action:** Check master PSM condition Check the PSM-DIVA wiring path If necessary, exchange the master PSM unit
PSM MIC FAIL		Master PSM microphone is defective. **Action:** Check master PSM condition Check the PSM-DIVA wiring path If necessary, exchange the master PSM unit
PSM AUDIO FAIL		Master PSM audio line is defective. **Action:** Check master PSM condition Check the PSM-DIVA wiring path If necessary, exchange the master PSM unit

Preset Table faults

NO CONFIGURATION		No software configuration is present in the DIVA unit. **Action:** Create and Store a configuration in the DIVA system
CFG CRC ERROR		Current DIVA configuration is corrupted (CRC check code has changed). **Action:** Re-store the configuration in the DIVA system Create and Store a new configuration in the DIVA system
CFG VERSION ERR		Current DIVA configuration has been made with a newer or a too old software version. **Action:** Create and Store a new configuration in the DIVA system

Evacuation inputs faults

M01 EI-X OPEN	X = 1-9	Master evacuation input X contact line is defective, the contact line is seen as an open line (no contact). **Action:** Check the linked contact condition Check the contact wiring path
SXX EI-Y OPEN	XX = 1-15, Y = 1-9	Slave XX evacuation input Y contact line is defective, the contact line is seen as an open line (no contact). **Action:** Check the linked contact condition Check the contact wiring path
M01 EI-X SHORT	X = 1-9	Master evacuation input X contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Check the linked contact condition Check the contact wiring path
SXX EI-Y SHORT	XX = 1-15, Y = 1-9	Slave XX evacuation input Y contact line is defective, the contact line is seen as an shorten line (short-circuit on contact). **Action:** Check the linked contact condition

		Check the contact wiring path
Fault inputs action		
M01 EFI-X ACTION	X = 1-2	Master evacuation fault X has been triggered. **Action:** Check the fault input wiring path Check the connected device condition If necessary, exchange the connected device
SXX EFI-Y ACTION	XX = 1-15, Y = 1-2	Slave XX evacuation fault Y has been triggered. **Action:** Check the fault input wiring path Check the connected device condition If necessary, exchange the connected device
Flash memories faults		
MSG FLASH FAILED		Message flash memory is defective. Messages cannot be played. **Action:** Please contact your Ateis dealer If necessary, exchange the DIVA unit
CFG FLASH FAILED		Configuration flash memory is defective. Configuration cannot work properly. **Action:** Please contact your Ateis dealer If necessary, exchange the DIVA unit
PGM FLASH FAILED		Program flash memory is defective. DIVA cannot work properly. **Action:** Please contact your Ateis dealer If necessary, exchange the DIVA unit
General disfunction and maintenance operations.		
DIVAs system has no power LED lit		The DIVA system is not properly connected to a power source or internal fuse is broken. **Action:** Check power supply condition Check power supply signal path Please contact your Ateis dealer If necessary, exchange the DIVA unit
DIVA system LEDs test		From time to time, please start a DIVA system LEDs test. For more information on how to perform a LEDs test, please read the LEDS/LOGIC TEST chapter.

15. LCD Messages List

DIVA displays several different string on its LCD screen. Here is a complete list with short description.

MESSAGE STRING	DESCRIPTION
System String	
RESTARTING	DIVA system is in a restart process
UPDATE SUCCESS	Device successfully updated
INIT PERIPHERALS	Peripheral initialization process
INITIAL SYSTEM,	System is in initialization process
PLEASE WAIT.....	Waiting for current action to end
SYSTEM REBOOT	Prompted before a system reboot
RESTART SYSTEM	Prompted before a system restart
UPDATING	Updating device
EVACUATION REPORT	Displayed when an evacuation state is activated
FAULTS REPORT	Displayed when a fault state is activated
EVENTS REPORT	Displayed when a normal audio is activated
Menu level 0	
SELECT DISPLAY	
EVAC. CONFIRM	Displayed as a validation when the evacuation process has been initiated
ALARM CONFIRM	Displayed as a validation when the alert process has been initiated
TEST CONFIRM	Displayed as a validation when the test process has been initiated
EVACUATION LIST	Displayed above the different evacuations process listed
FAULTS LIST	Displayed above the different faults listed
EVENTS LIST	Displayed above the different events listed
FUNCTIONS MENU	Displayed when accessing the functions menu
Menu level 1	
USER LOGIN	Displayed when accessing user login menu
USER LOGOUT	Displayed when accessing user logout menu
LOG RECORD	Displayed when accessing log record menu
SET SYSTEM TIME	Displayed when accessing set system time menu
STOP ALL EVENTS	Displayed when accessing stop all events menu
READ MAC ADDRESS	Displayed when accessing read MAC address menu
IP SETTINGS	Displayed when accessing IP settings menu
AUDIO LEVELS	Displayed when accessing audio levels menu
SPK/AMP MONITOR	Displayed when accessing spk/amp monitor menu
VERSIONS DISPLAY	Displayed when accessing versions display menu
CRC DISPLAY	Displayed when accessing CRC display menu
LANGUAGE SELECT	Displayed when accessing language select menu
READ VOLTMETER	Displayed when accessing read voltmeter menu
LEDS/LOGIC TEST	Displayed when accessing user login menu
Menu level 2	
READ IP ADDRESS	Displayed when accessing read IP address submenu
READ SUBNET MASK	Displayed when accessing read subnet mask submenu
READ GATEWAY	Displayed when accessing read gateway submenu
READ PORT	Displayed when accessing read port submenu
SET IP ADDRESS	Displayed when accessing set ip address submenu
SET SUBNET MASK	Displayed when accessing set subnet mask submenu
SET GATEWAY	Displayed when accessing set gateway submenu
SET PORT	Displayed when accessing set port submenu
SET FIREMAN LEV	Displayed when accessing set fireman lev submenu
SET MIC/LINE LEV	Displayed when accessing set mic/line lev submenu

SET MUSIC 1 LEV	Displayed when accessing set music 1 lev submenu
SET MUSIC 2 LEV	Displayed when accessing set music 2 lev submenu
SET SPEAKER LEV	Displayed when accessing set speaker lev submenu
RESET MONITORING	Displayed when accessing reset monitoring submenu
GET REFERENCE	Displayed when accessing get reference submenu
FIRMWARE VERSION	Displayed when accessing firmware submenu
FPGA VERSION	Displayed when accessing FPGA version submenu
FIRMWARE CRC	Displayed when accessing firmware CRC submenu
CONFIG CRC	Displayed when accessing config CRC submenu
ENGLISH LANGUAGE	Displayed when accessing english language submenu
CHINESE LANGUAGE	Displayed when accessing chinese language submenu
Menu funcion	
DISABLE	Displayed when disabling possibility is given
ENABLE	Displayed when enabling possibility is given
NOT CONNECTED	Displayed when a device is not connected
PHY ERROR	Displayed when the PHY chip is defective
Set Time	
24 HR	Displayed as time format option
AM/PM	Displayed as time format option
AM	Displayed when time is on the AM range
PM	Displayed when time is on the PM range
Password	
0123456789ABCDEFGHIJ	Displayed when entering username and password are required
KLMNOPQRSTUVWXYZ**APL**	Displayed when entering username and password are required

16. Safety Declaration

Warning
This sign indicates a potentially hazardous situation that can result in death or serious personal injury.

- Do not expose the DIVA to extreme temperatures, direct sunlight, humidity, or dust, which could cause fire or electrical shock hazard.
- Keep away water or other liquids from the DIVA. Otherwise fire or electrical shock may result.
- Connect the power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Otherwise fire and electrical shock hazard results.
- When disconnecting the power cord from an AC outlet always grab the plug. Never pull the cord. A damaged power cord is a potential risk of fire and electrical shock hazard.
- Avoid touching power plugs with wet hands. Doing so is a potential electrical shock hazard.
- Take care for correct polarity when operating the DIVA from a DC power source. Reversed polarity may cause damage to the unit or the batteries.
- Avoid placing heavy objects on power cords. A damaged power cord is a fire and electrical shock hazard.
- Do not cut, scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard. Ask your ATEÏS dealer for replacement.
- Turn off immediately the unit, remove the power cord from the AC outlet and consult your ATEÏS dealer in any of the following circumstances:
    - Smoke, odor, or noise getting out of the unit.
    - Foreign objects or liquids get inside the DIVA.
    - The unit has been dropped or the shell is damaged.
    - The power cord is damaged.

If you continue using the DIVA, fire and electrical shock may result.

- Do not drop or insert metallic objects or flammable materials into the unit as this may result in fire and electrical shock.
- Do not remove the DIVA's cover, as there are exposed parts inside carrying high voltages that may cause an electrical shock. Contact your ATEÏS dealer if internal inspection, maintenance, or repair is necessary.
- Do not try to make any modifications to the DIVA. This is a potential fire and electrical shock hazard.
- Avoid the DIVA's ventilation slots to be blocked. Blocking the ventilation slots is a potential fire hazard.

Caution
This sign indicates a potentially hazardous situation that can result in moderate or minor personal injury and/or property damage.

- To prevent the unit from falling down and causing personal injury and/or property damage, avoid installing or mounting the unit in unstable locations.

- Leave enough space above and below the unit to provide good ventilation of the DIVA. If the airflow is not adequate, the DIVA will heat up inside and may cause a fire.
- Operate the DIVA in an environment with a free-air temperature of between 0 °C and 40 °C (32 °F and 104 °F).
- Turn off all audio equipment when making any connections to the DIVA, and make sure to use adequate cables.
- Do not use benzene, thinner, or chemicals to clean the DIVA. Use only a soft, dry cloth.
- If the DIVA is moved from a cold place (e.g., overnight in a car) to a warmer environment, condensation may form inside the unit, which may affect performance. Allow the DIVA to acclimatize for about one hour before use.

17. International sales and service points

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